

FIG. 1

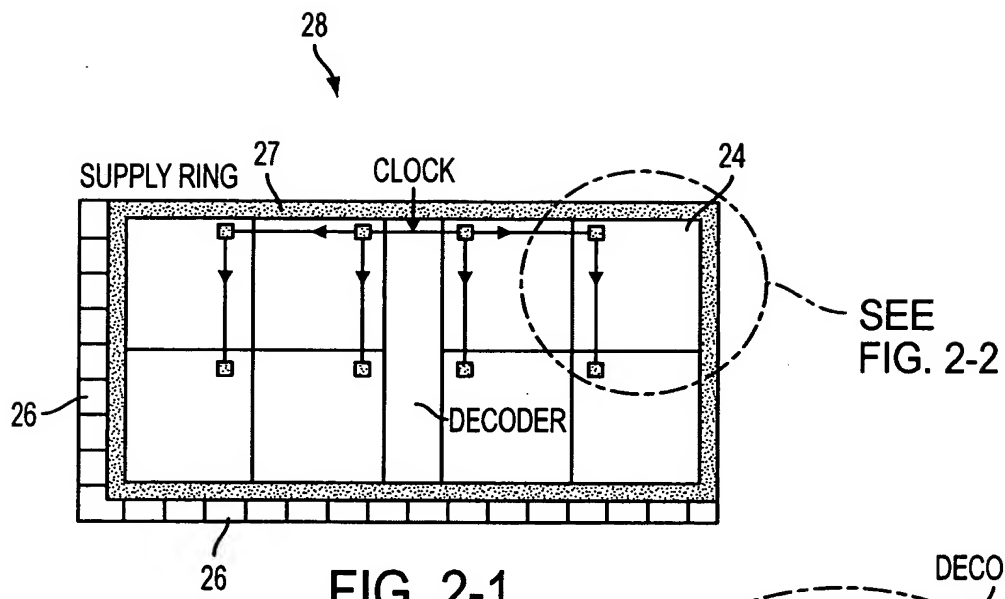


FIG. 2-1

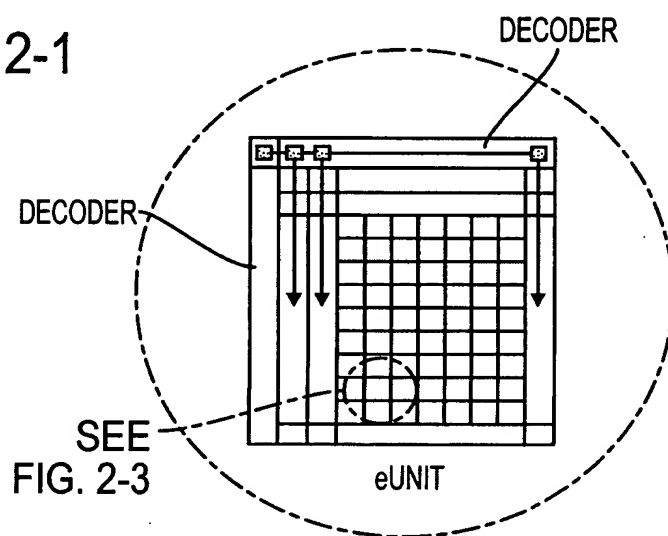


FIG. 2-2

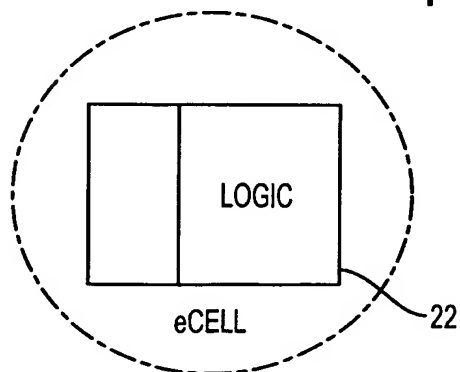


FIG. 2-3

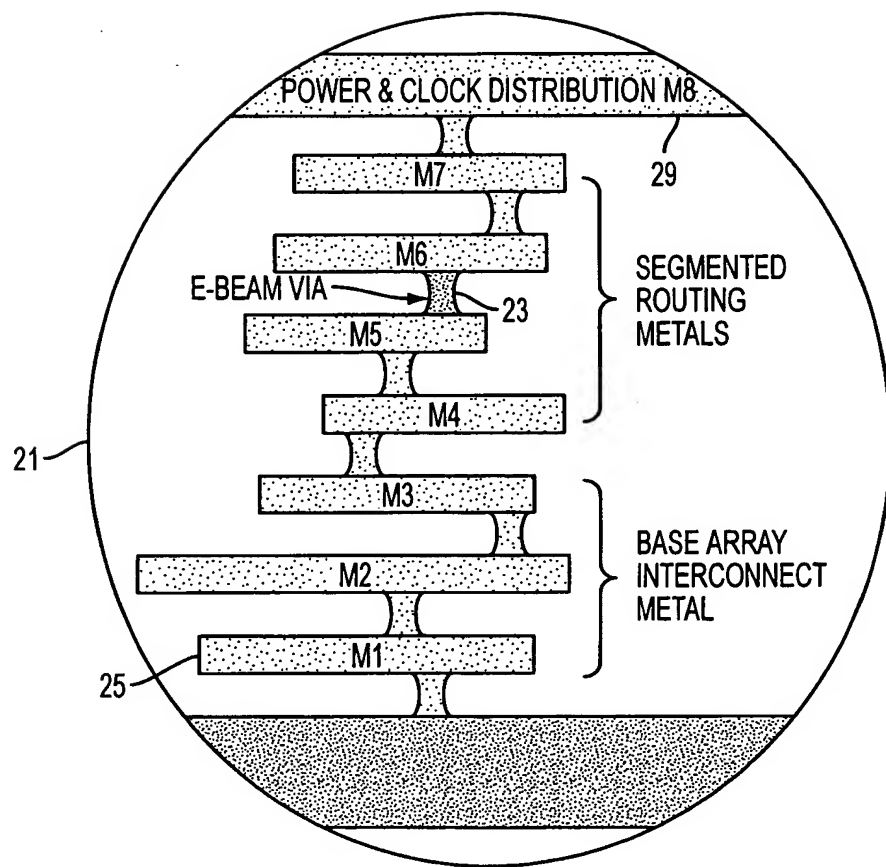


FIG. 2A

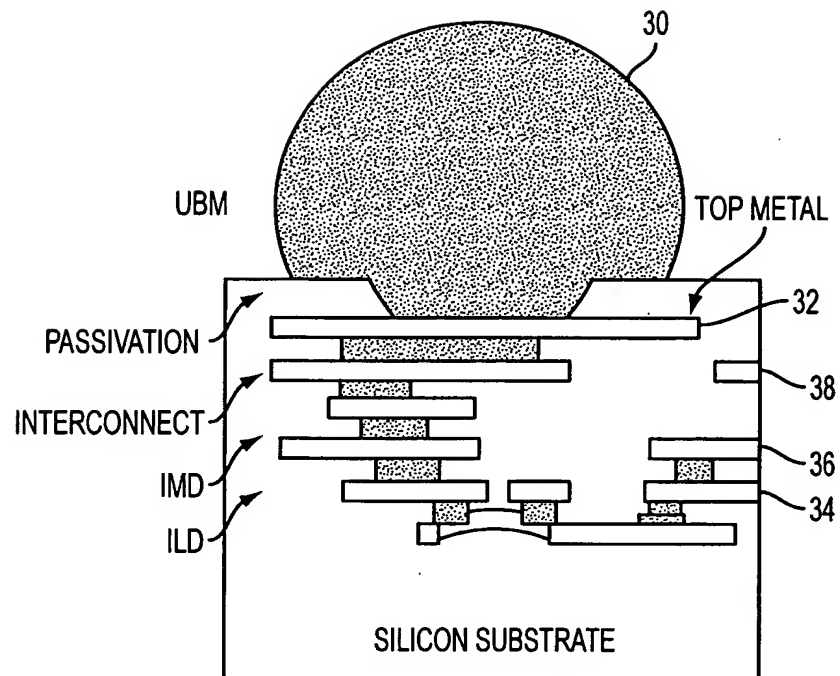


FIG. 3A

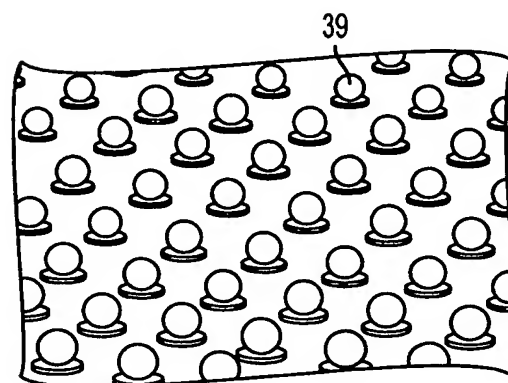


FIG. 3B

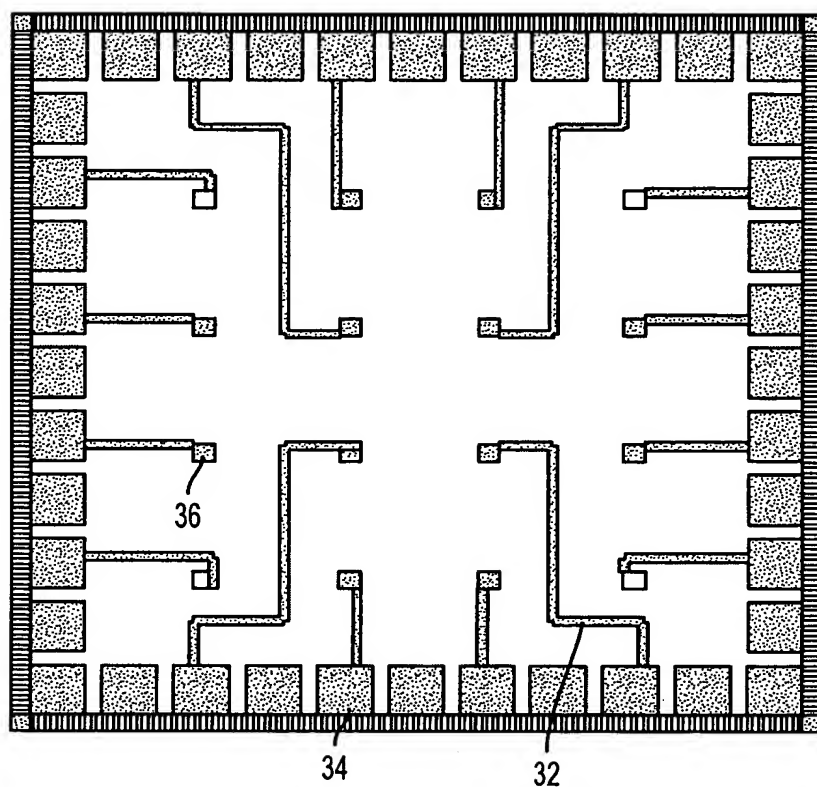


FIG. 3C

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B	BUMP DIAMETER	$150\mu\text{m} \pm 10\mu\text{m}$ (IN WAFER)	$70\mu\text{m} \pm 10\mu\text{m}$ (IN WAFER)
C	Cu BUMP HEIGHT	$20\mu\text{m} \pm 3\mu\text{m}$ (IN WAFER)	$10\mu\text{m} \pm 3\mu\text{m}$ (IN WAFER)
D	BUMP ROOT DIAMETER	$90\mu\text{m}$	$60\mu\text{m}$
E	PASSIVATION HOLE SIZE	$70\mu\text{m}$	$40\mu\text{m}$
F	BUMP PITCH	$200\mu\text{m}$	$120\mu\text{m}$

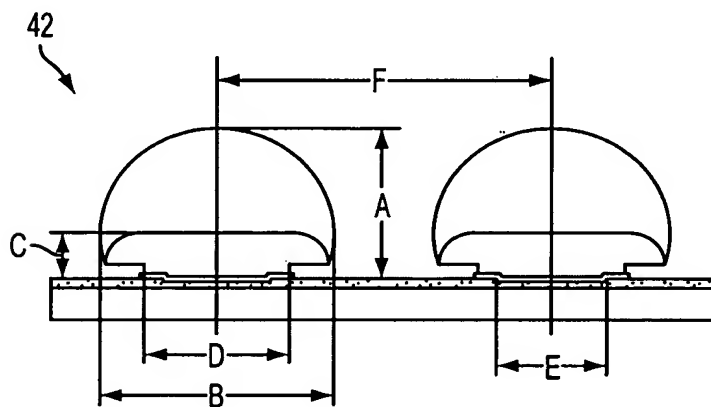


FIG. 4

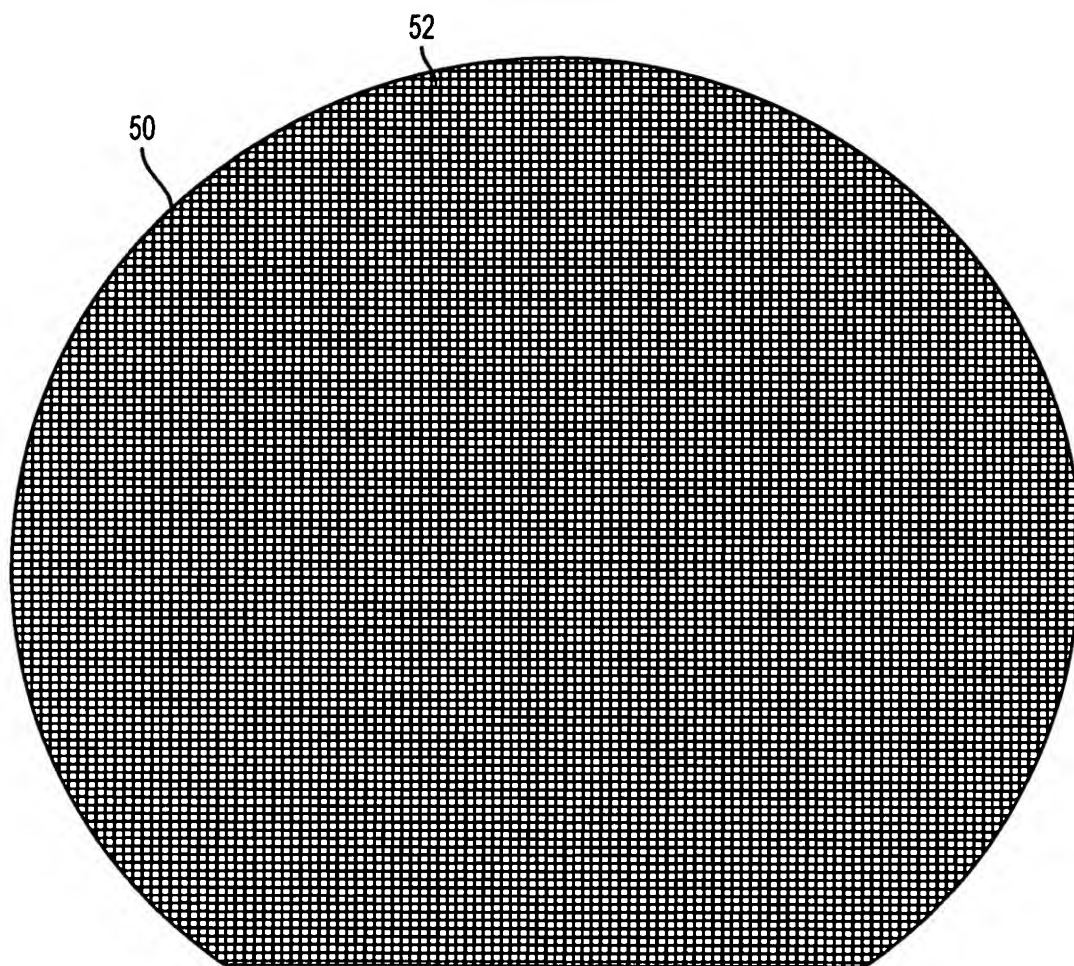


FIG. 5

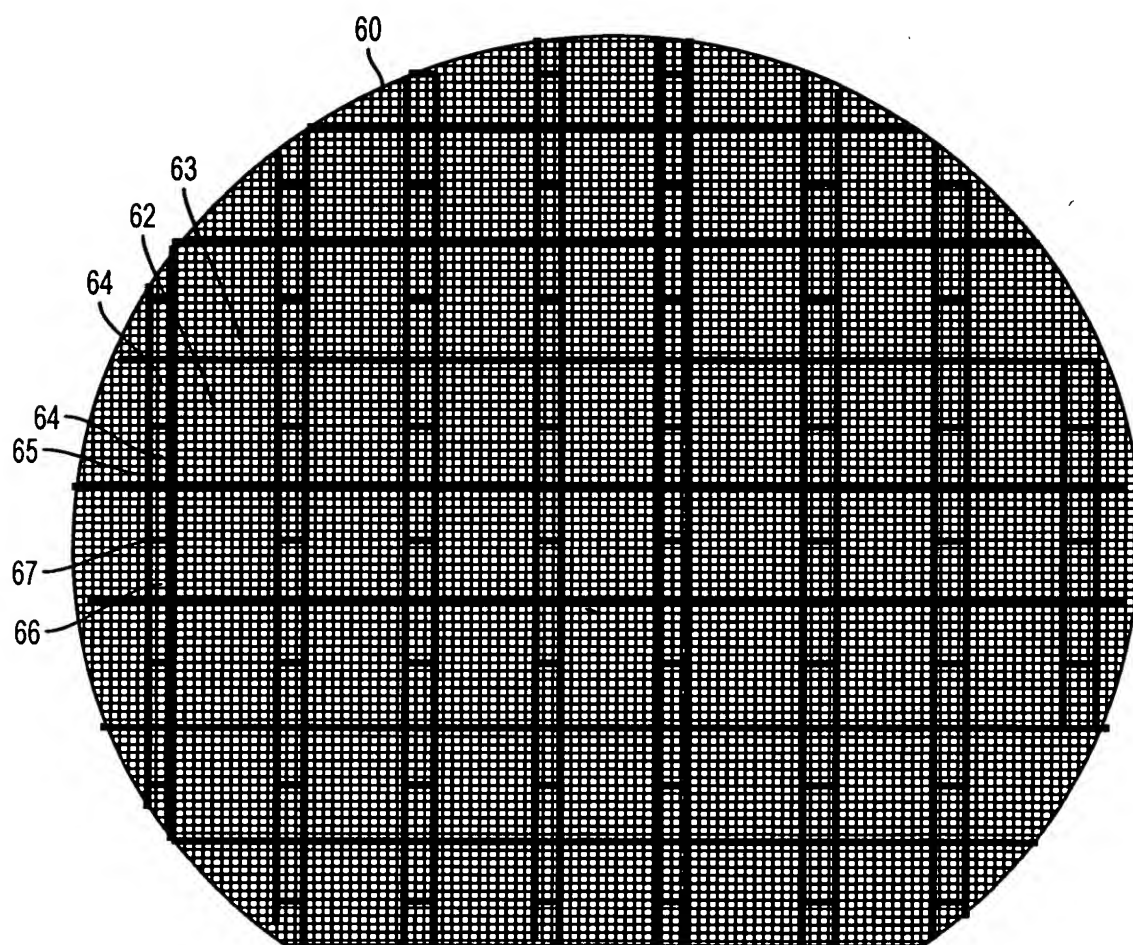


FIG. 6

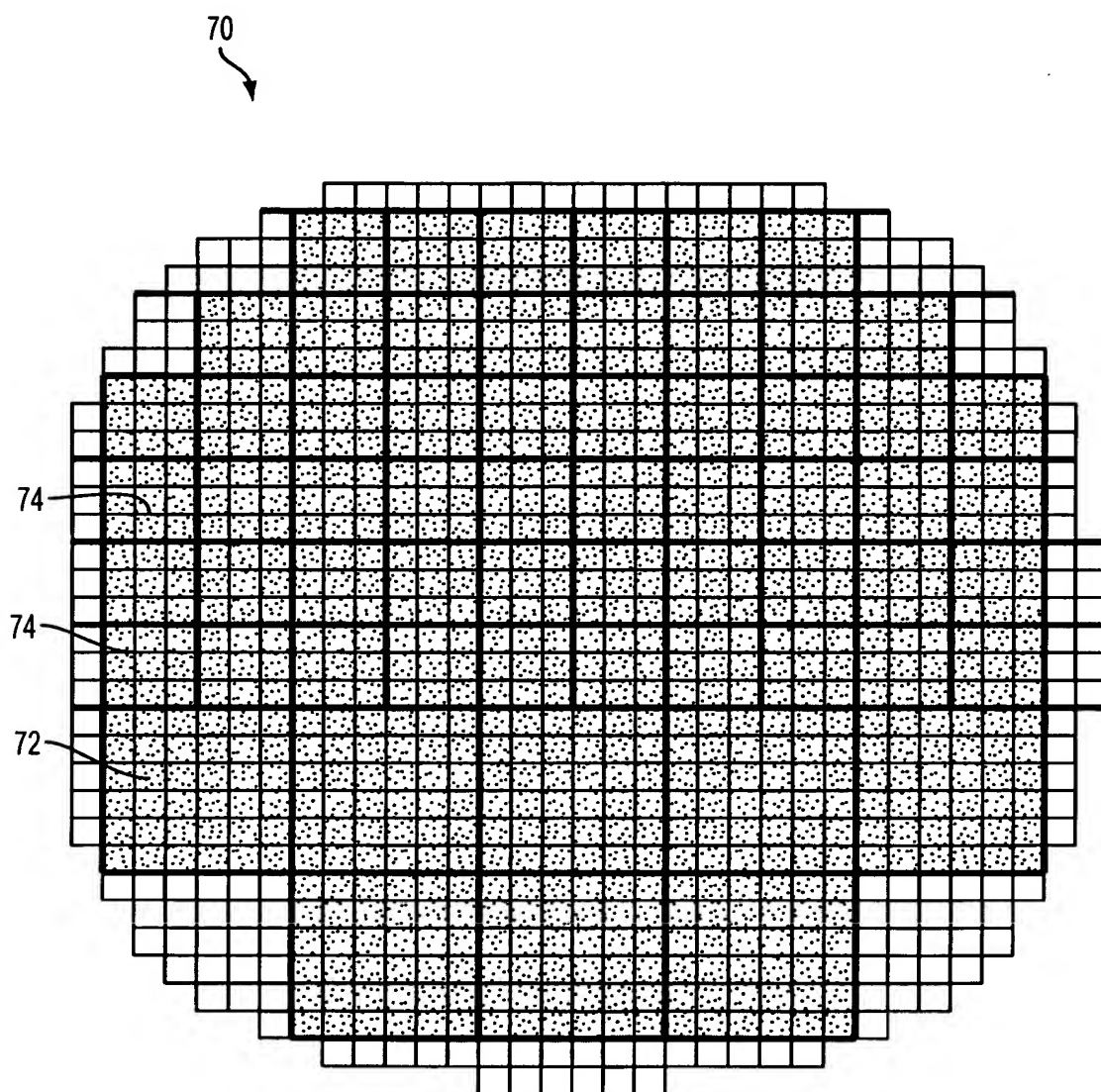


FIG. 7

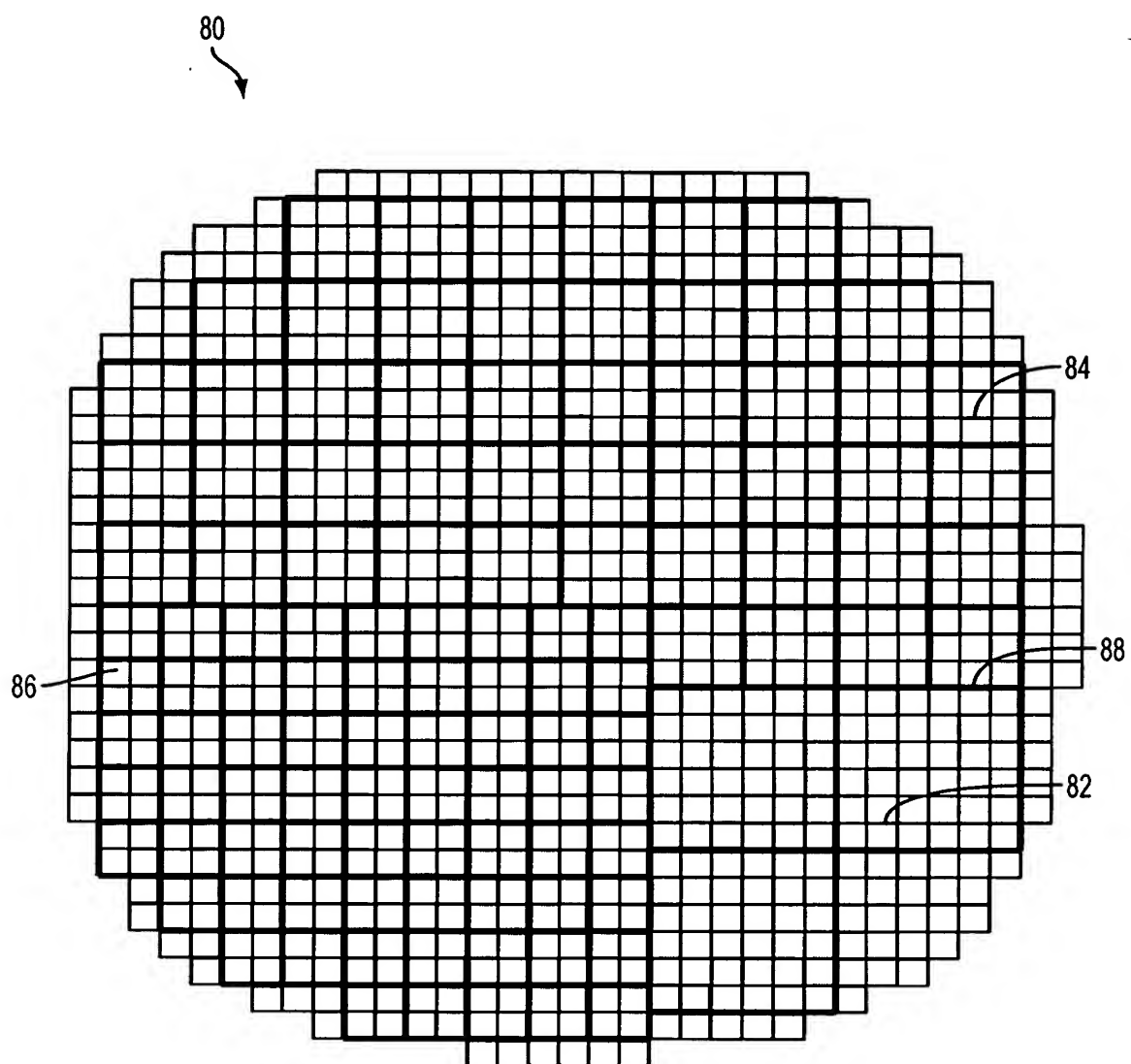
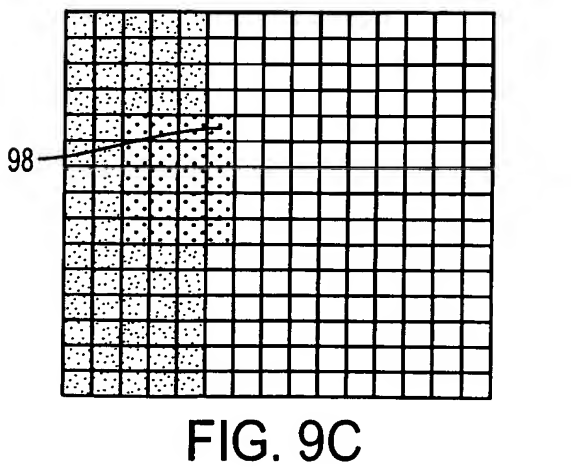
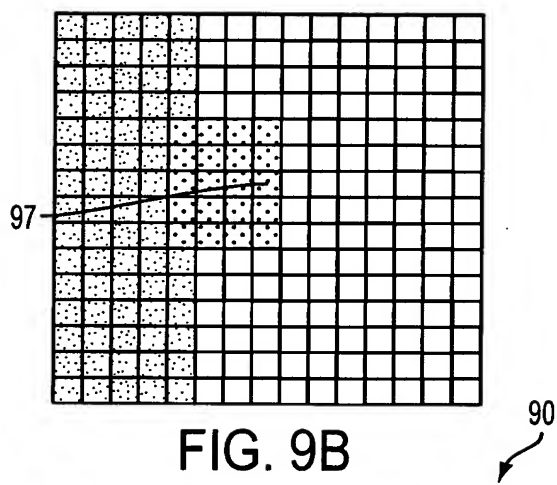
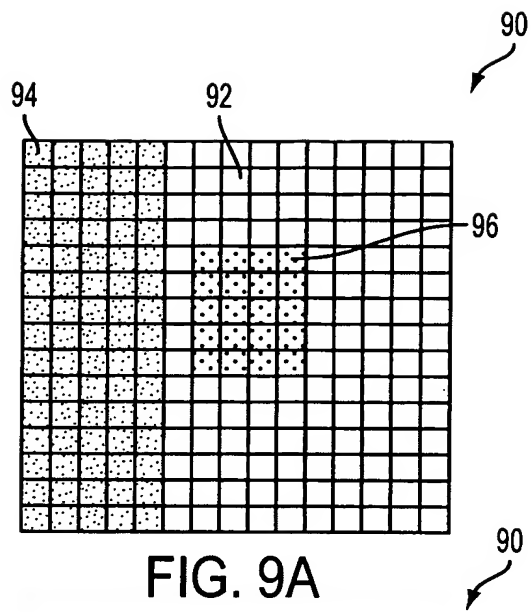


FIG. 8



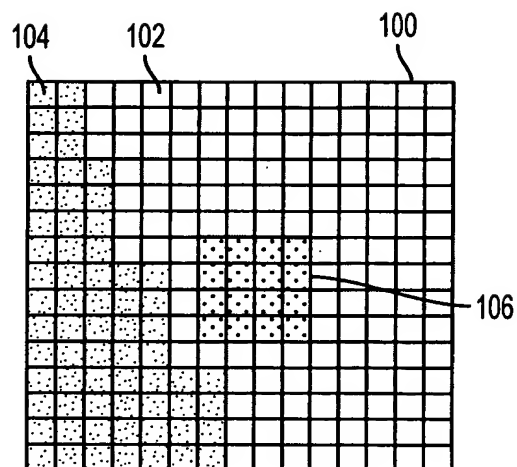


FIG. 10A

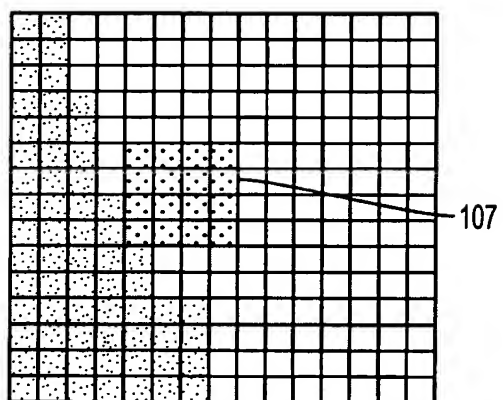


FIG. 10B

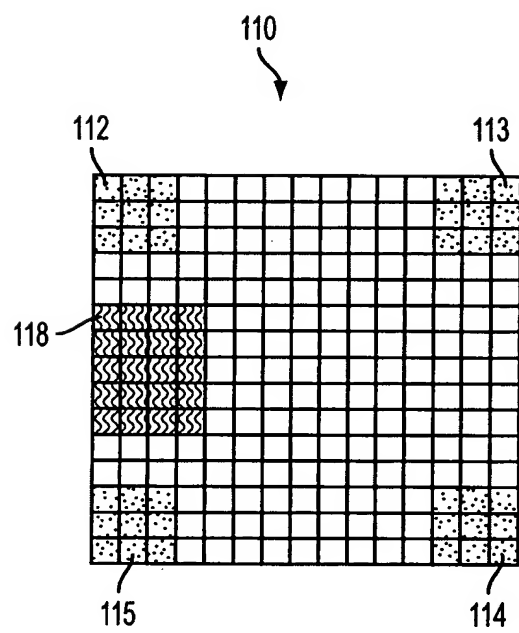


FIG. 11

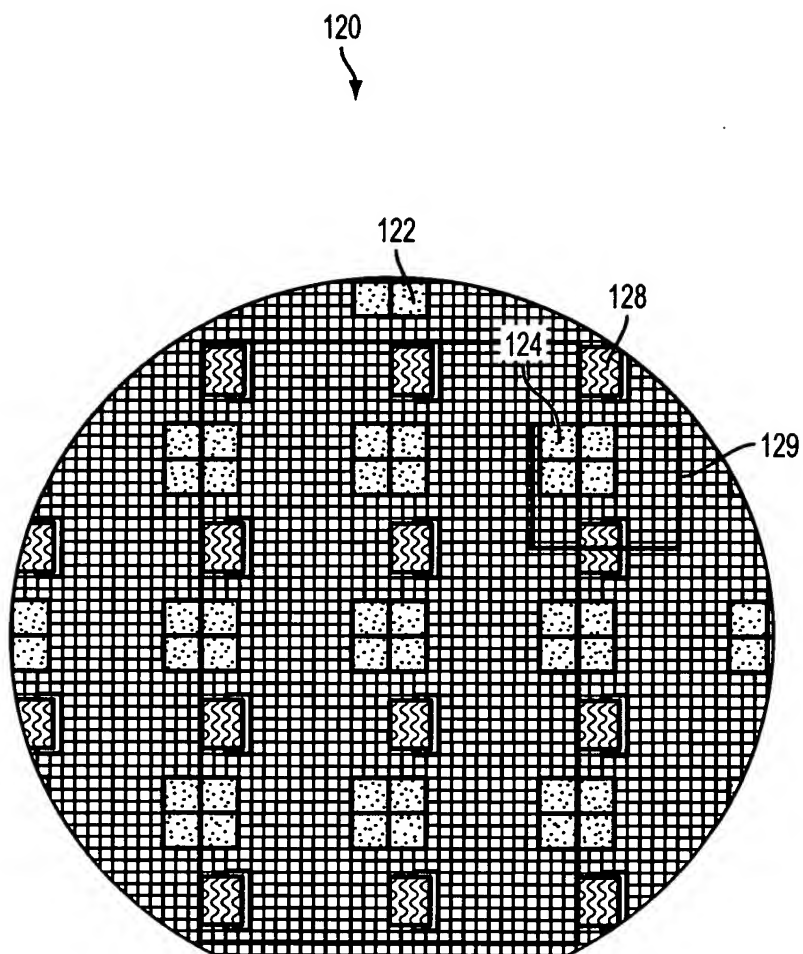


FIG. 12

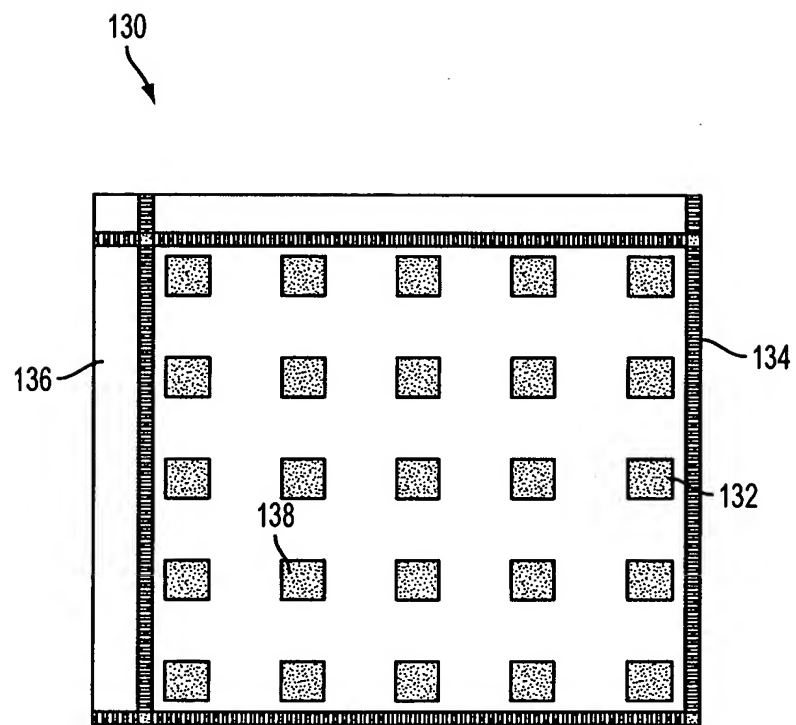


FIG. 13

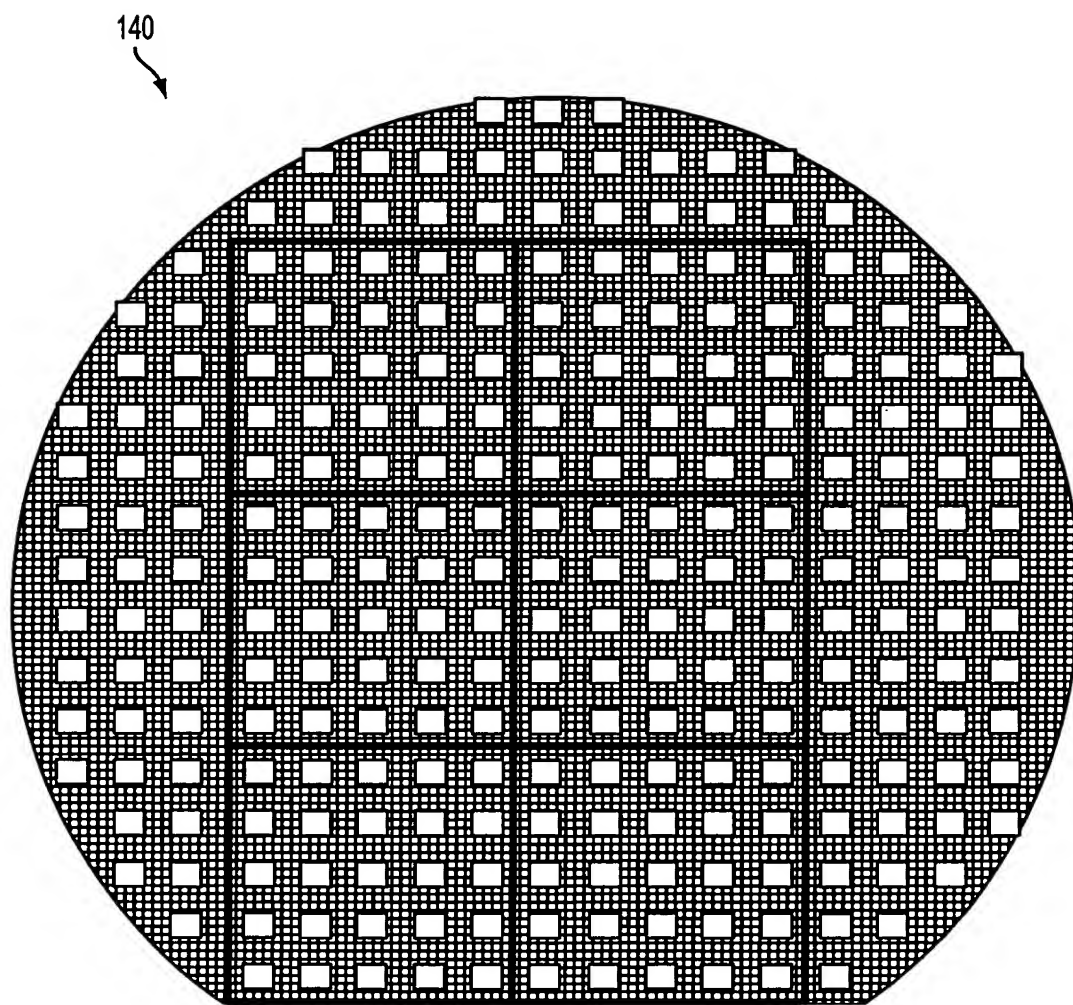


FIG. 14

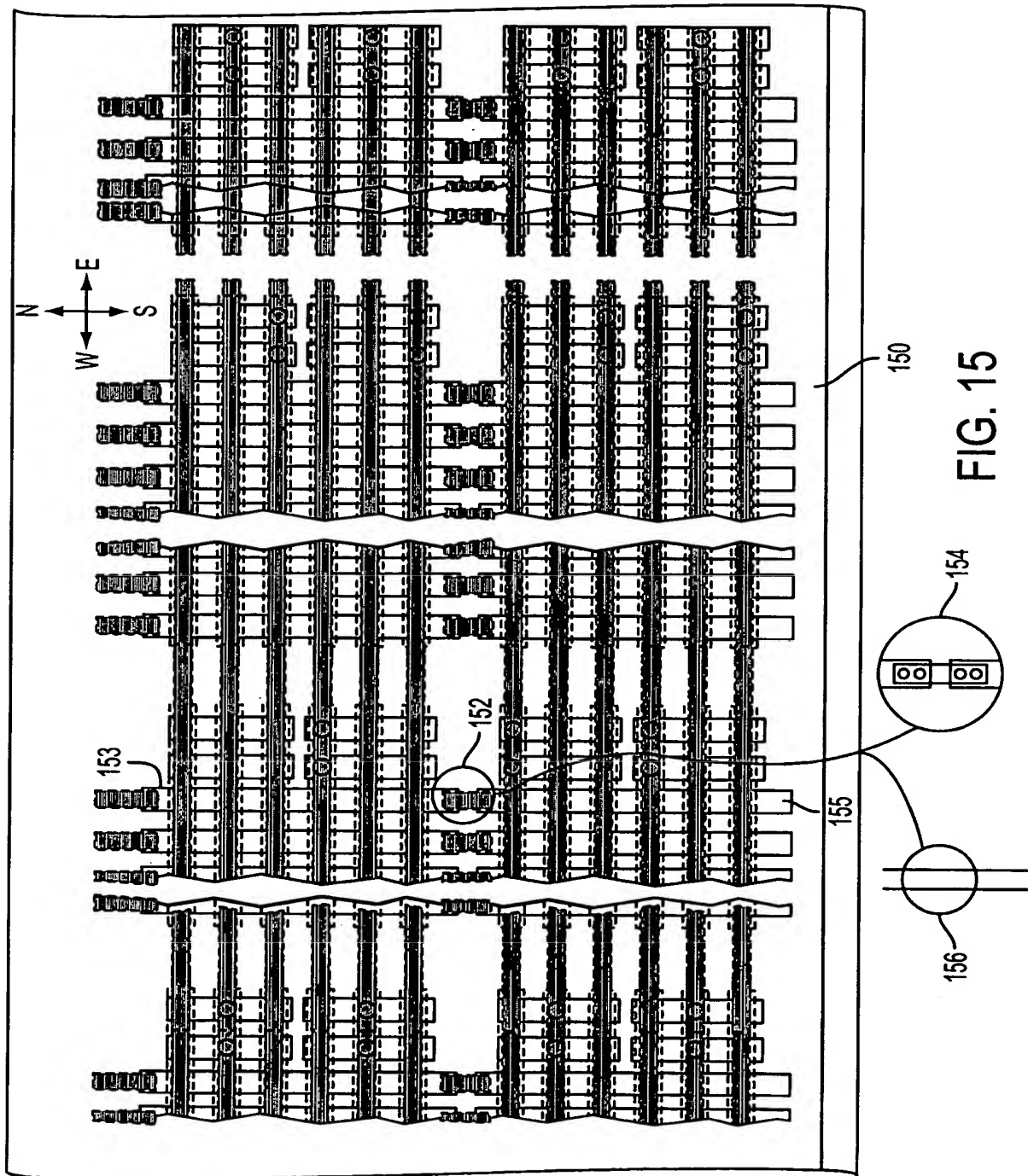
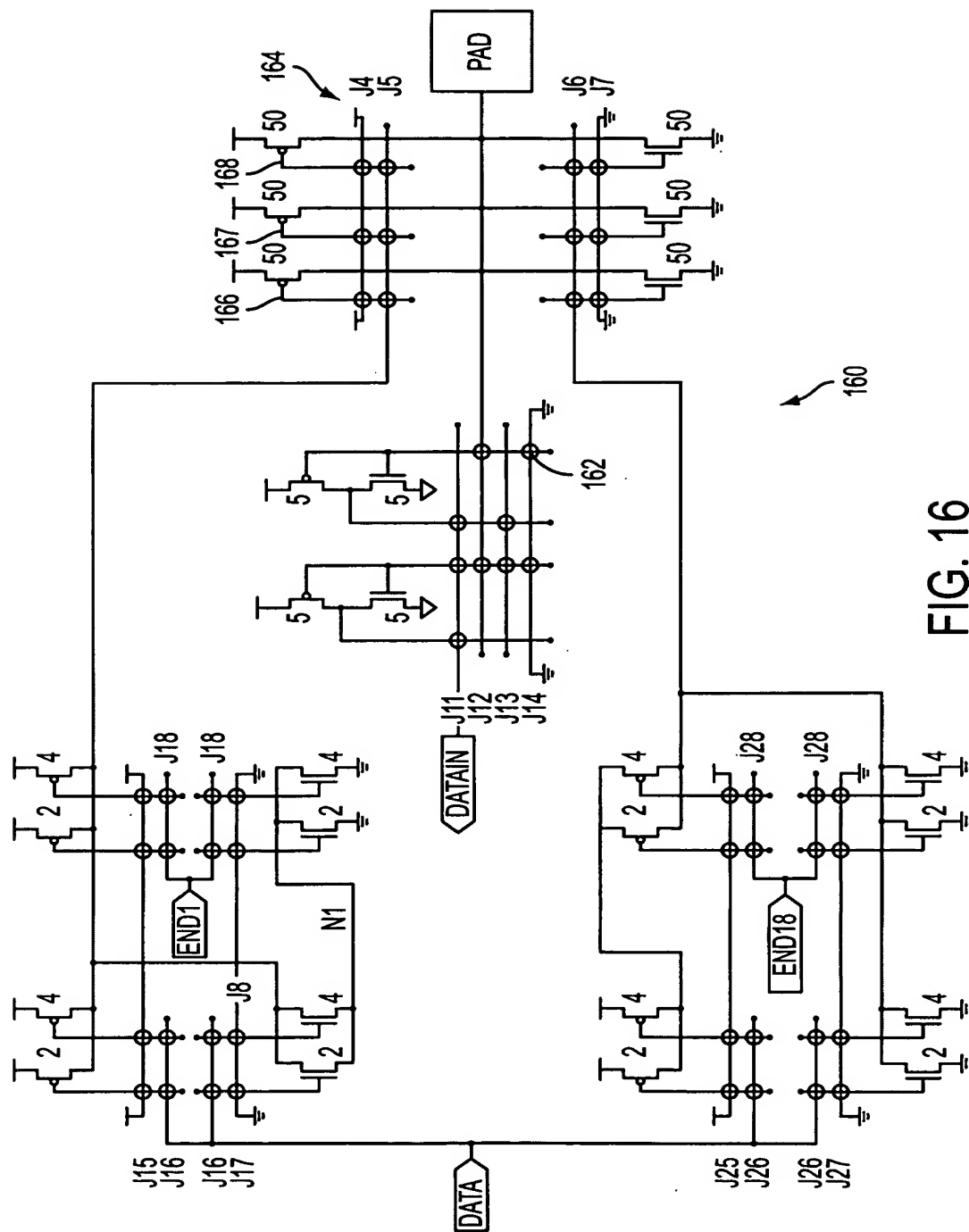


FIG. 15



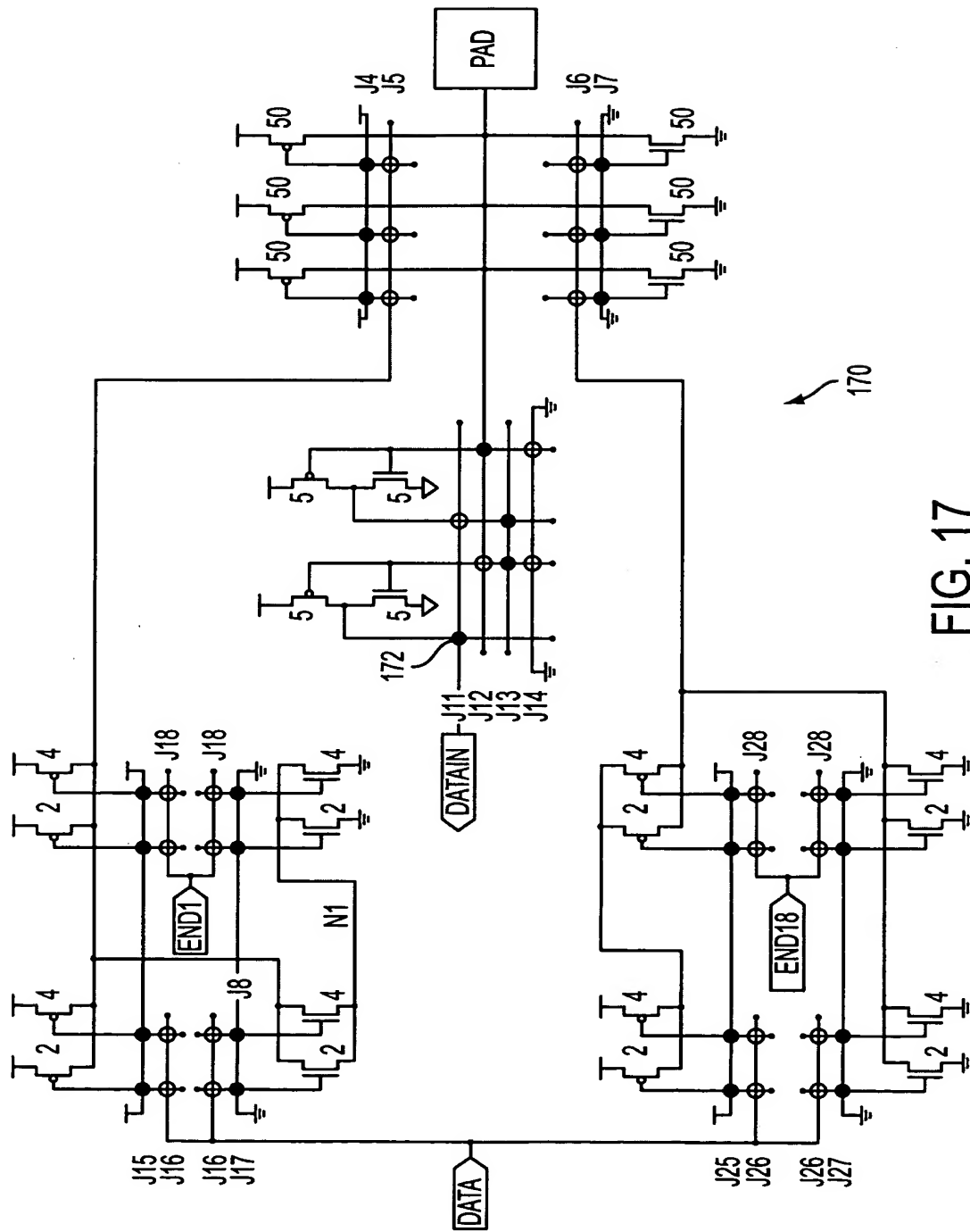


FIG. 17

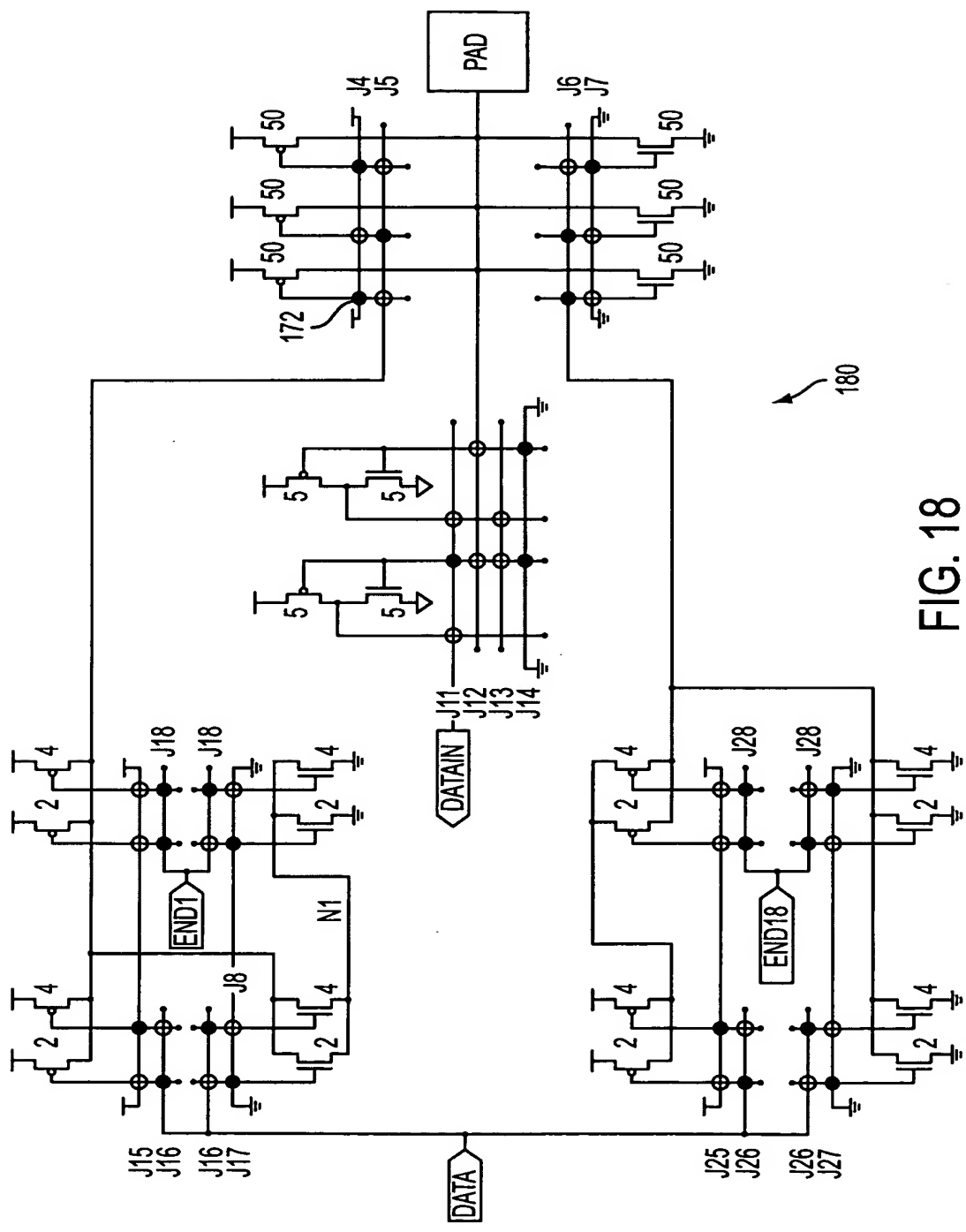


FIG. 18

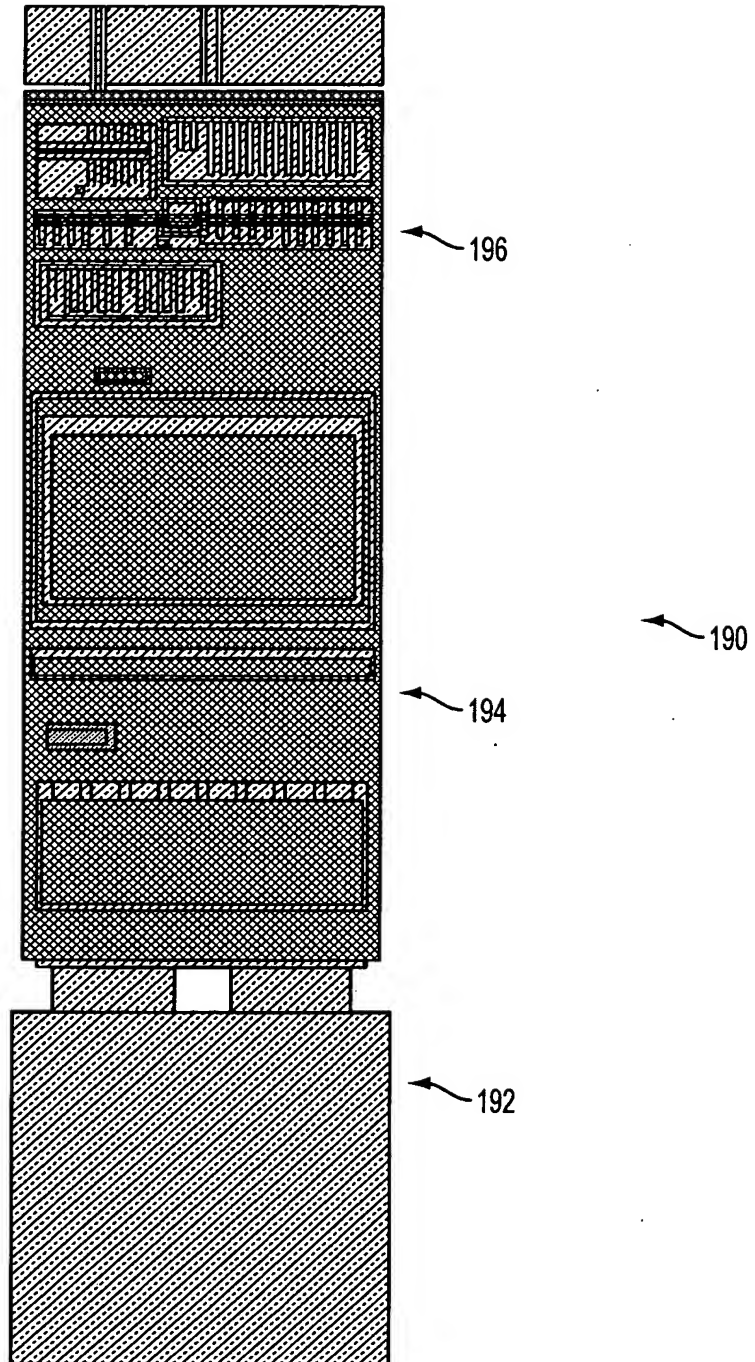


FIG. 19

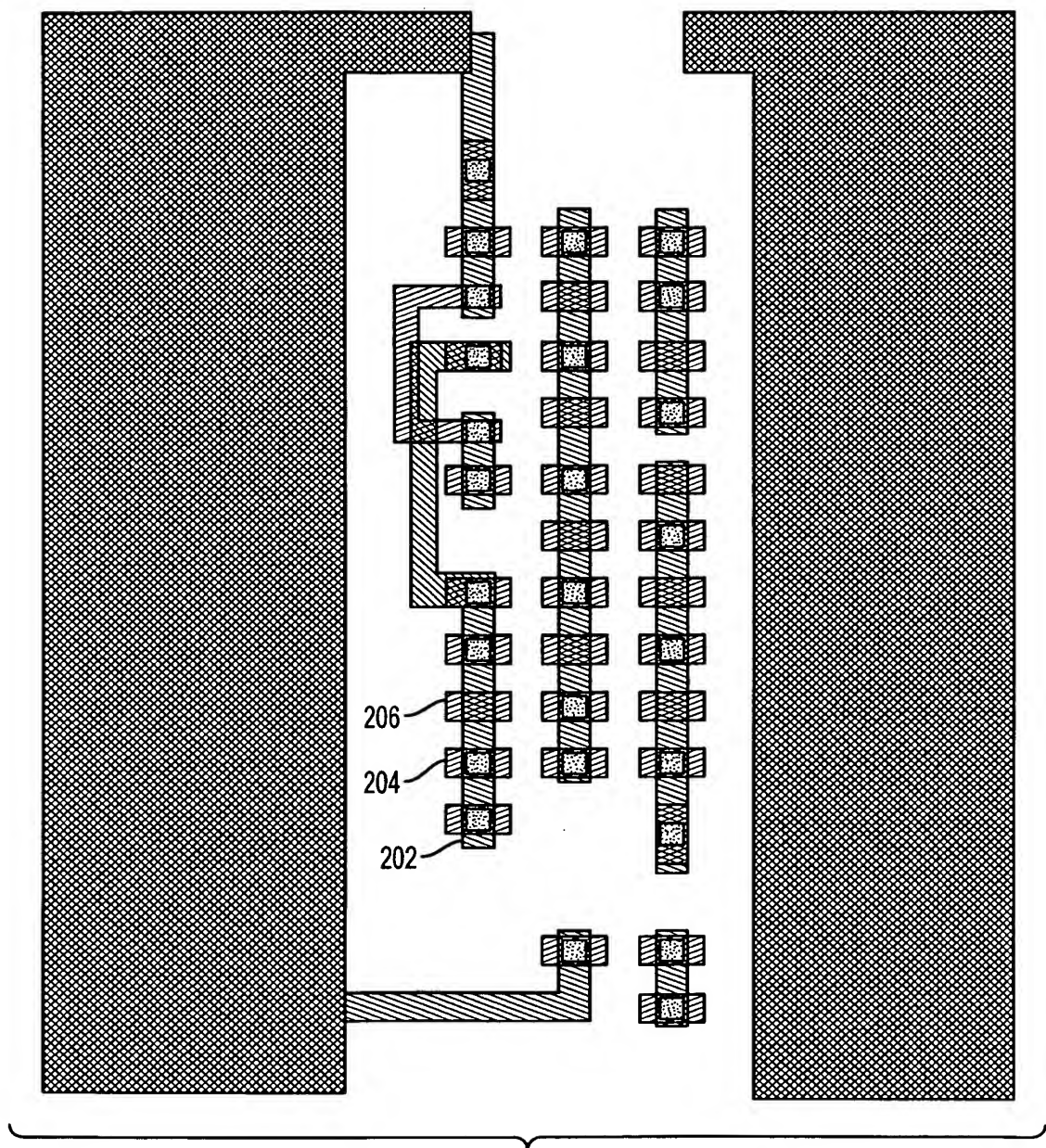
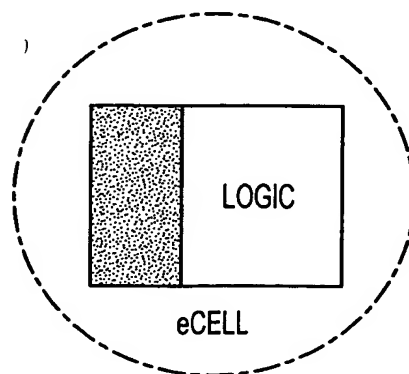
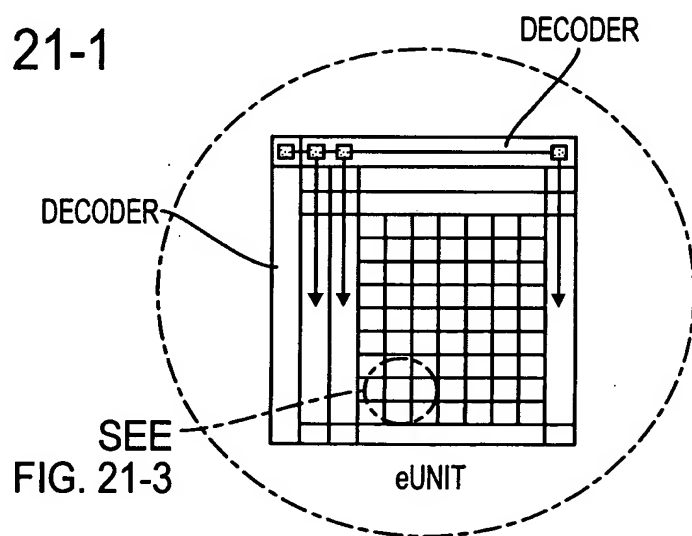
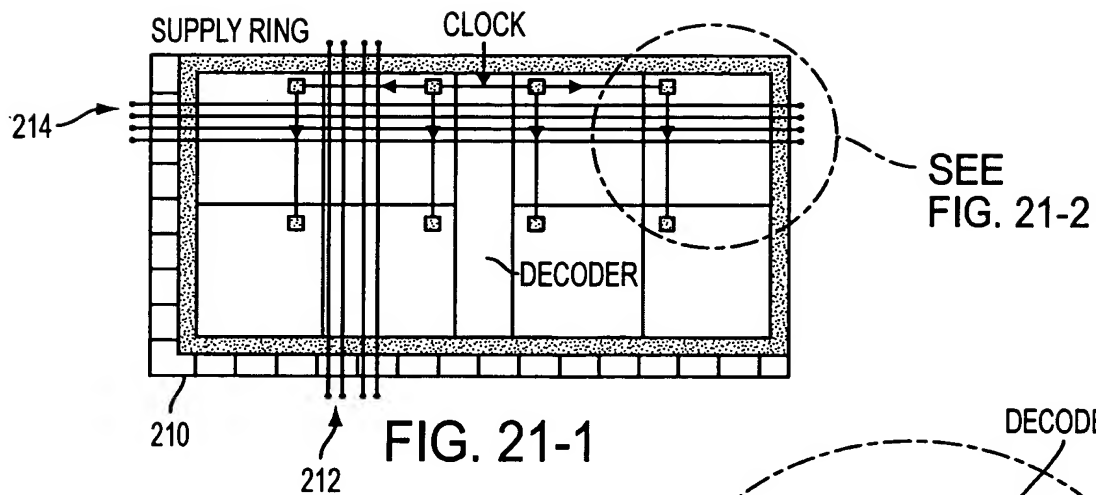


FIG. 20



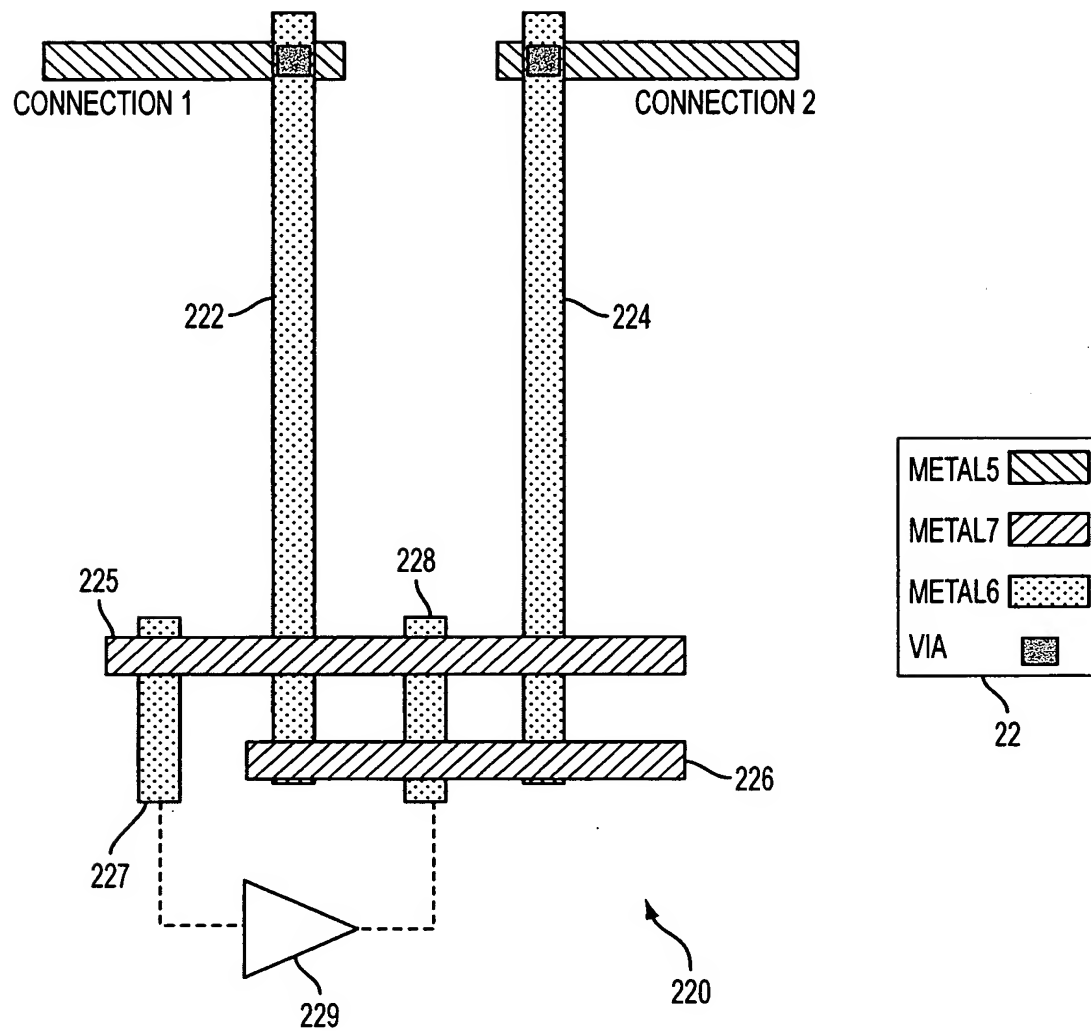


FIG. 22

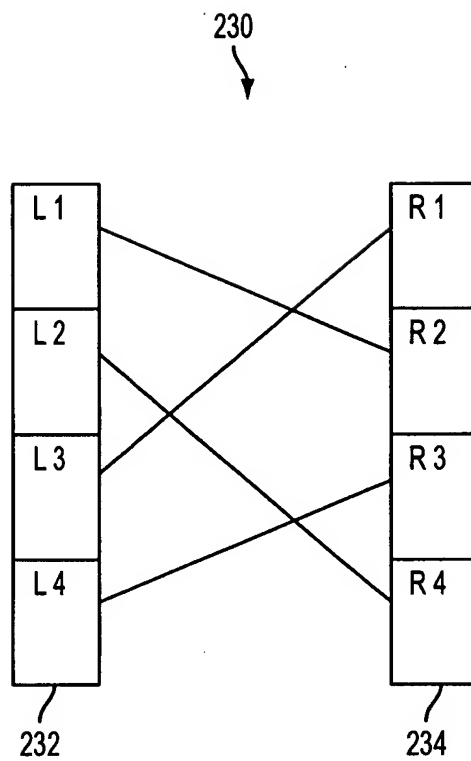


FIG. 23

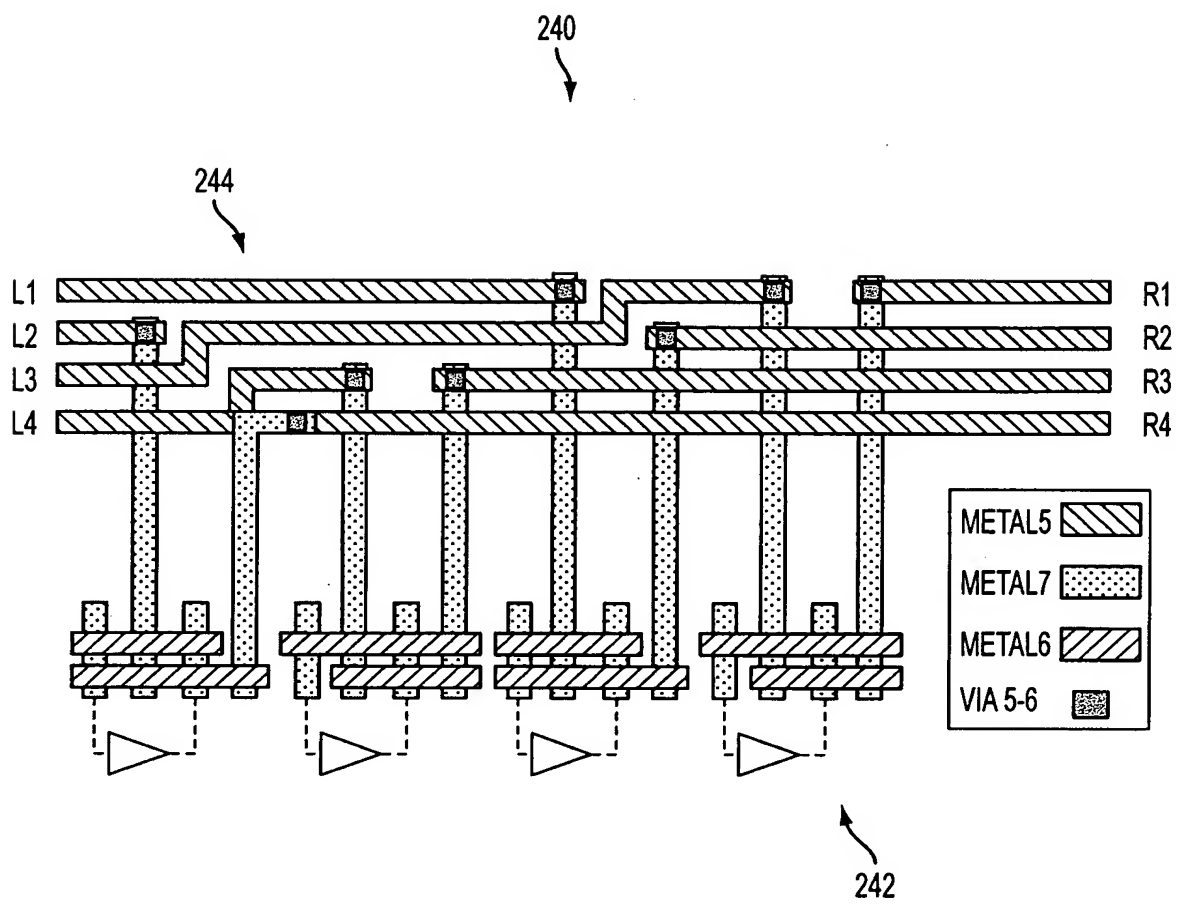
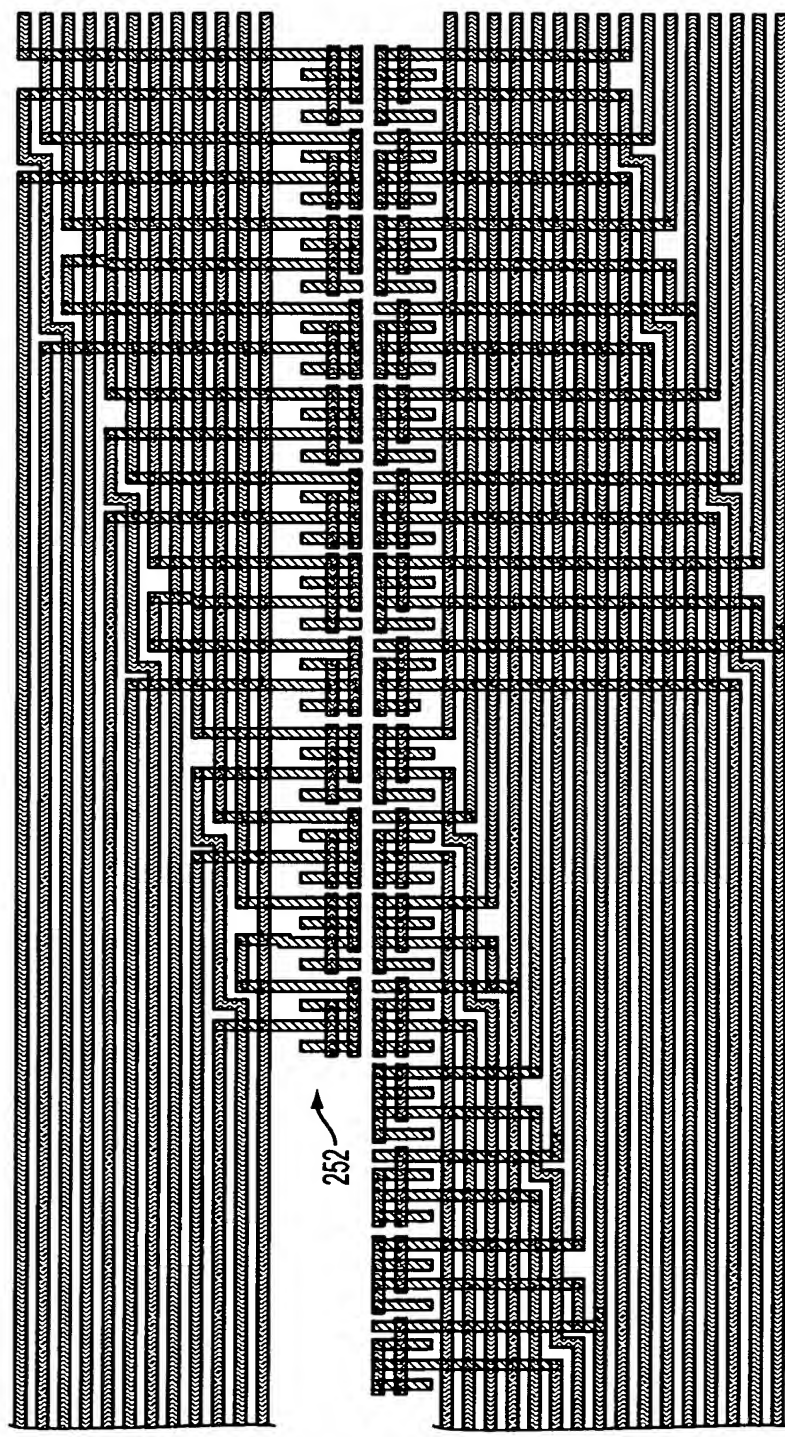


FIG. 24

250



252

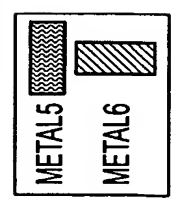


FIG. 25

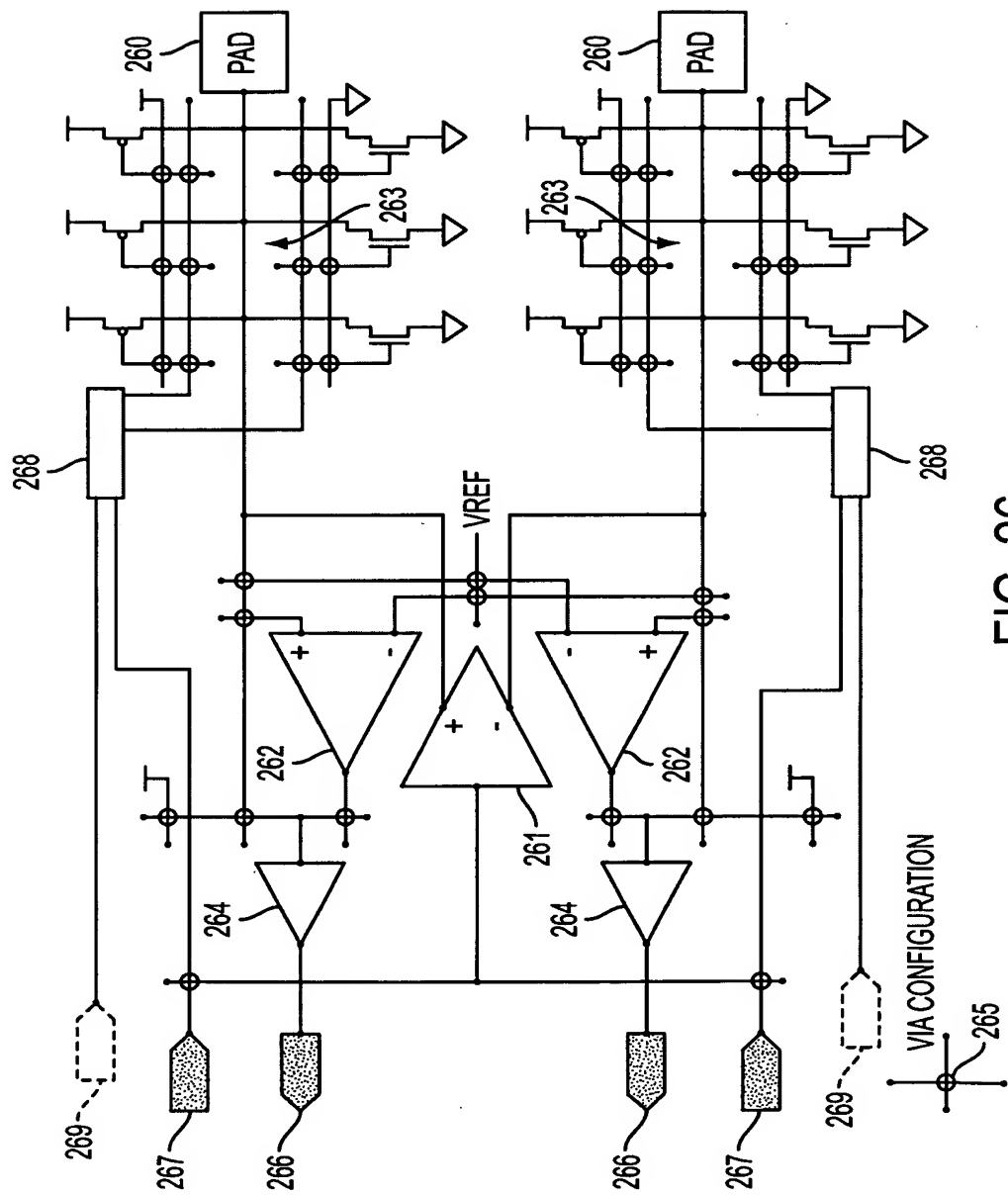


FIG. 26

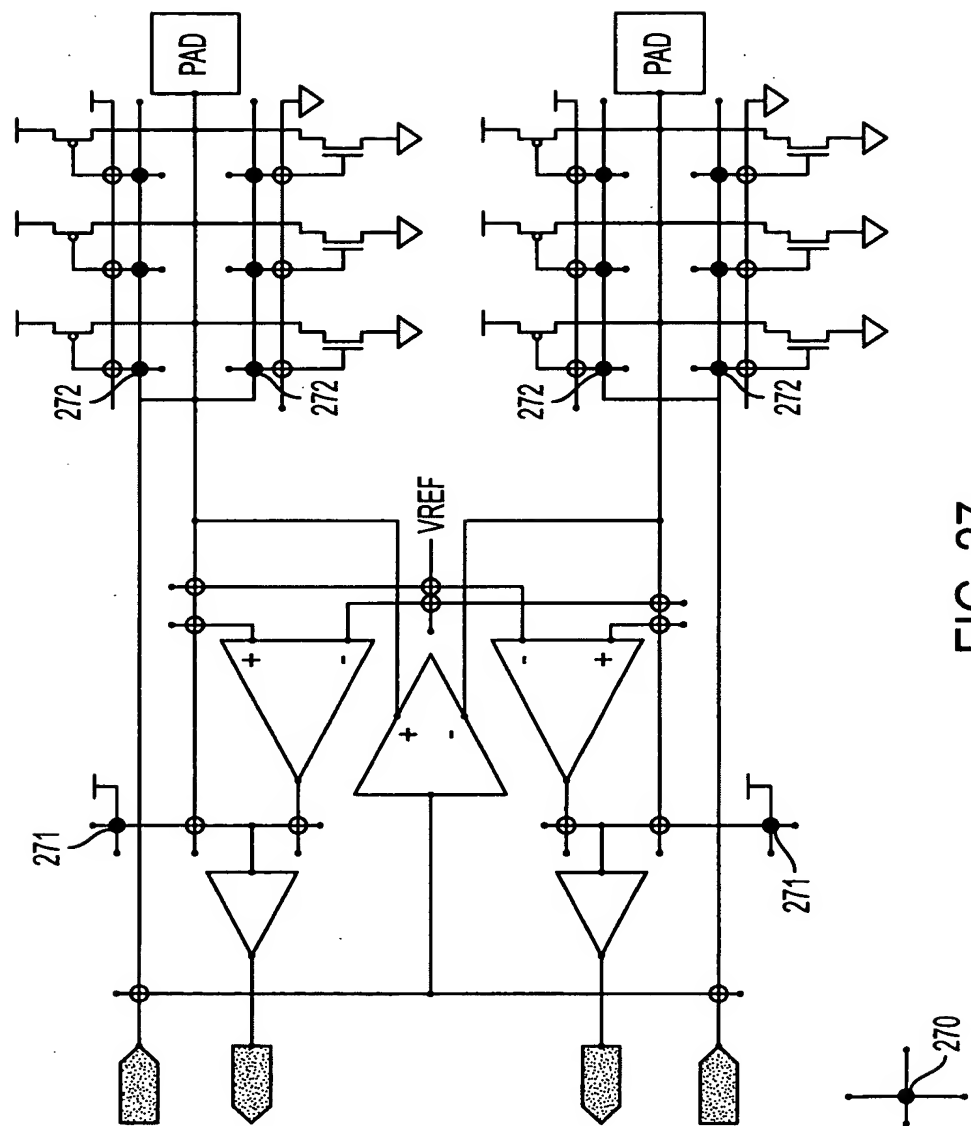


FIG. 27

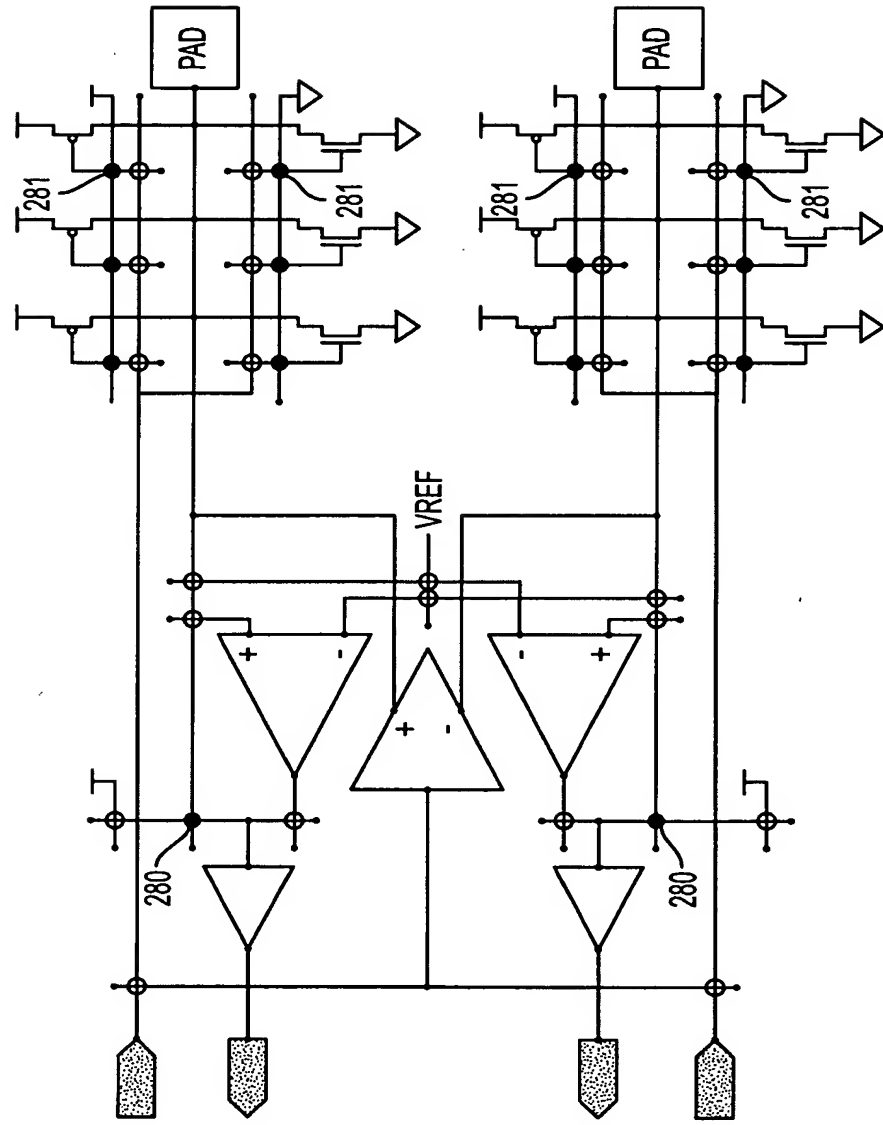


FIG. 28

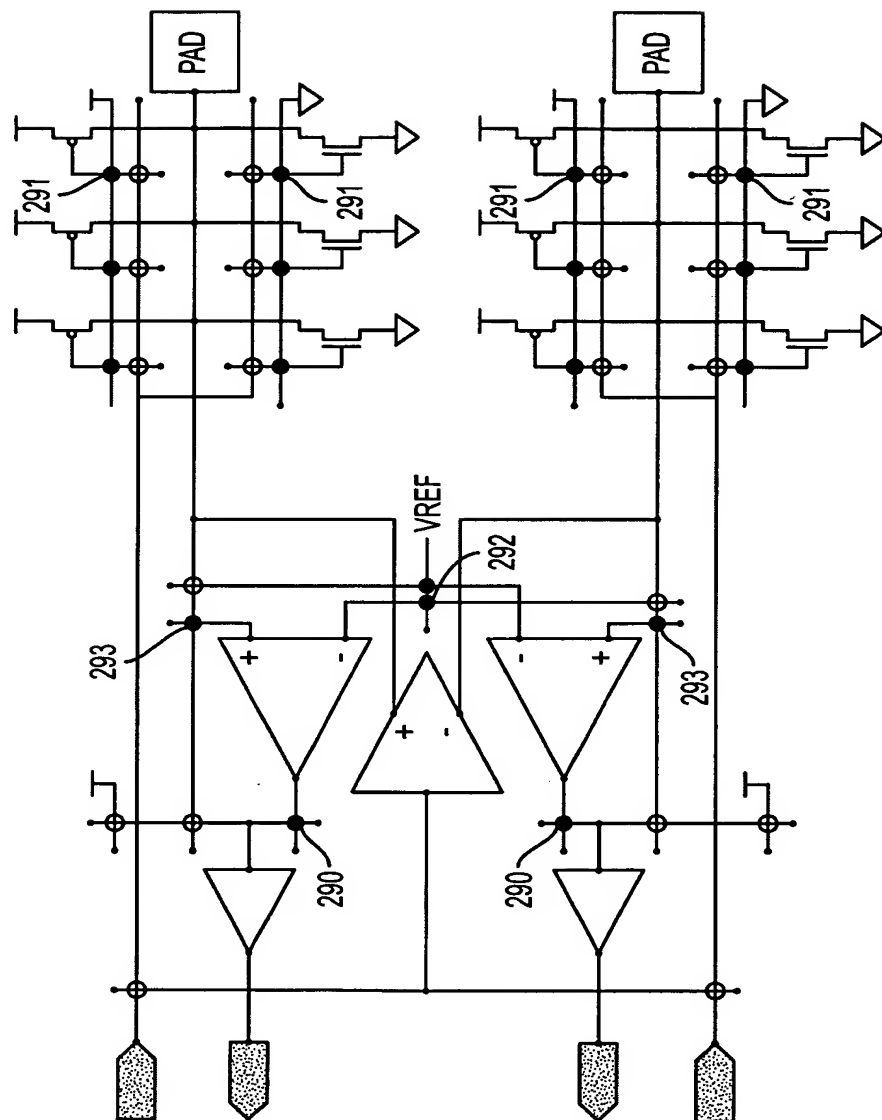


FIG. 29

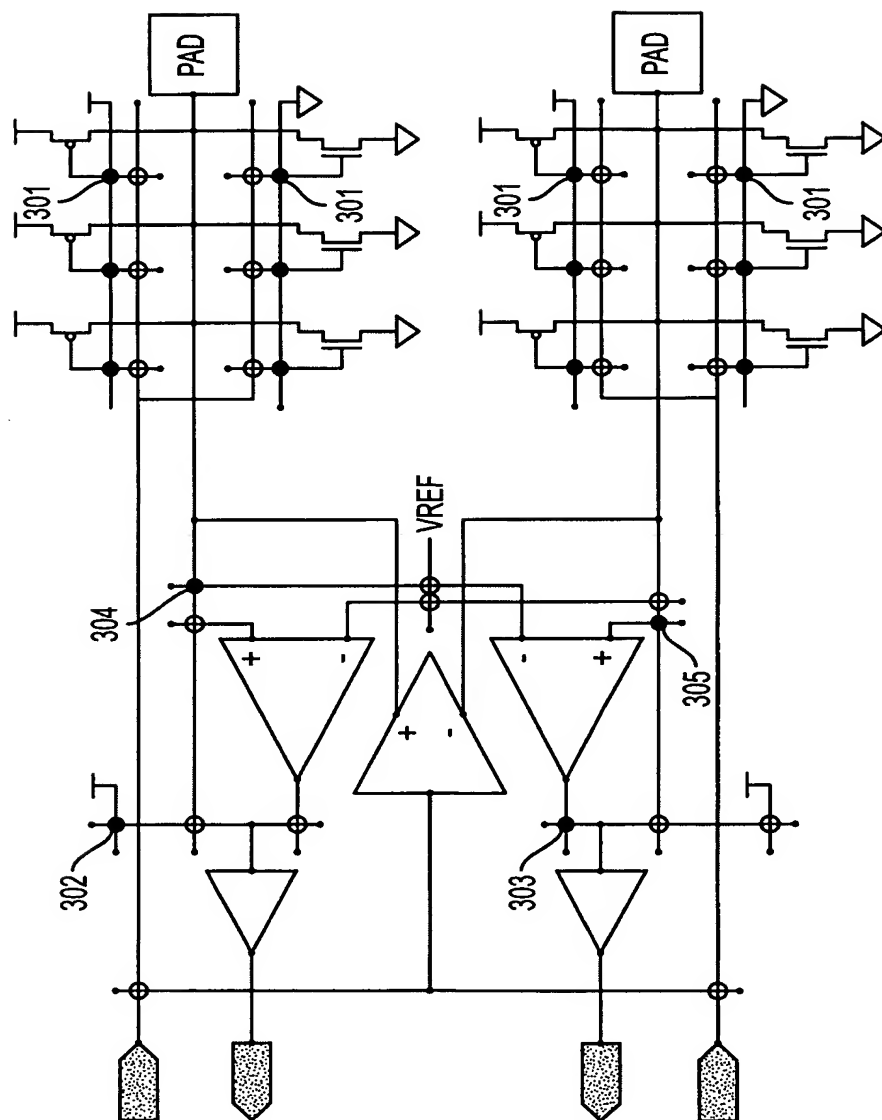


FIG. 30

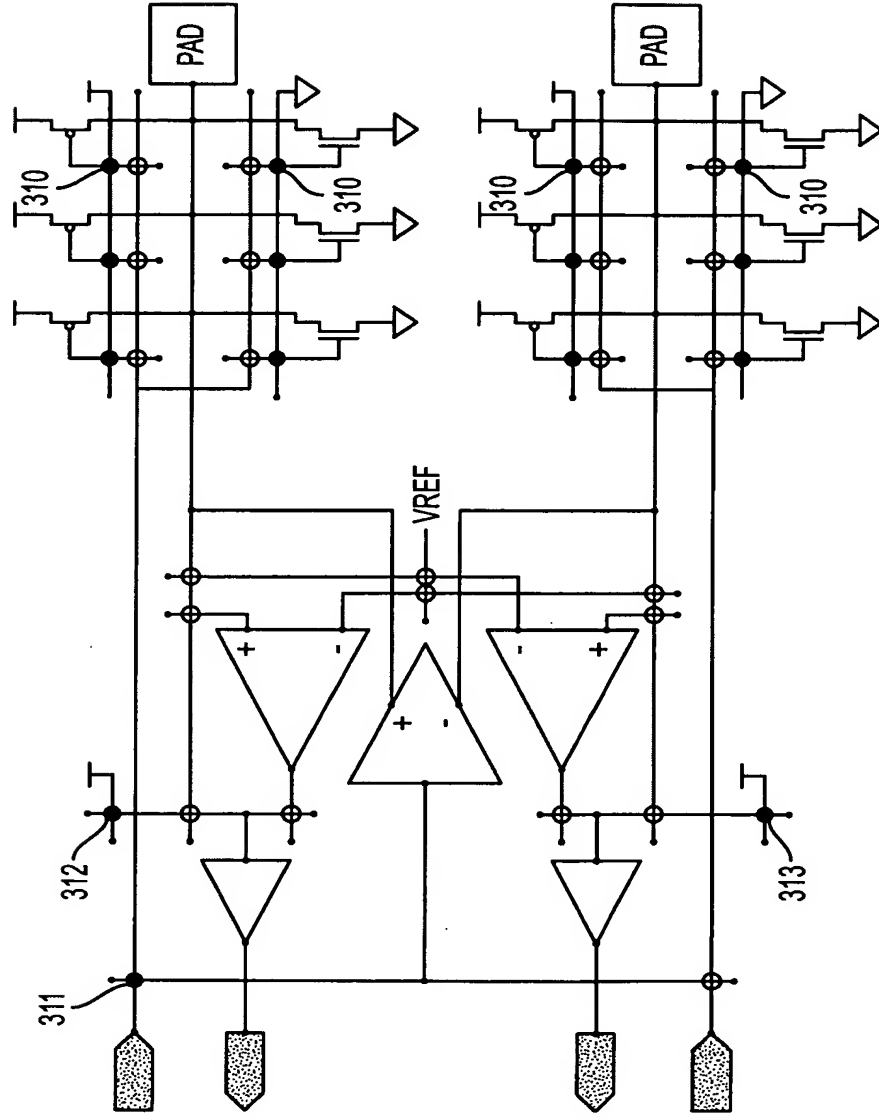


FIG. 31

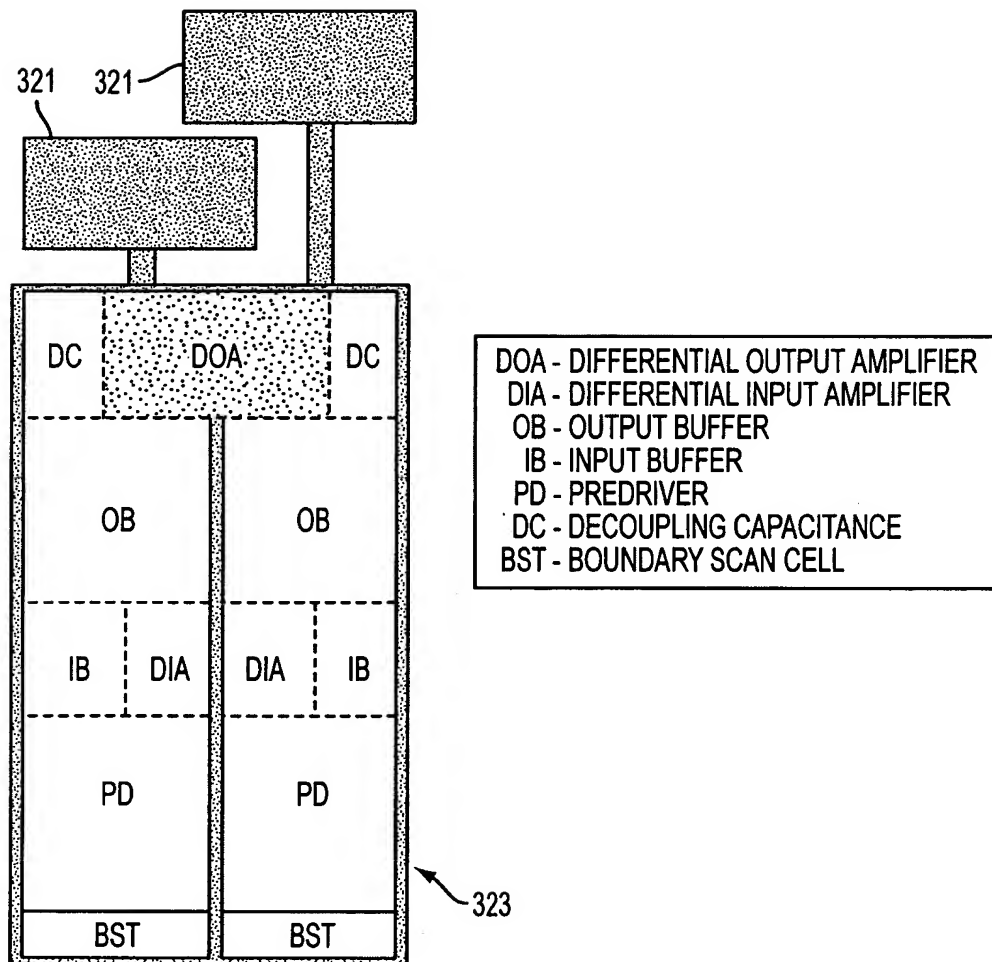


FIG. 32

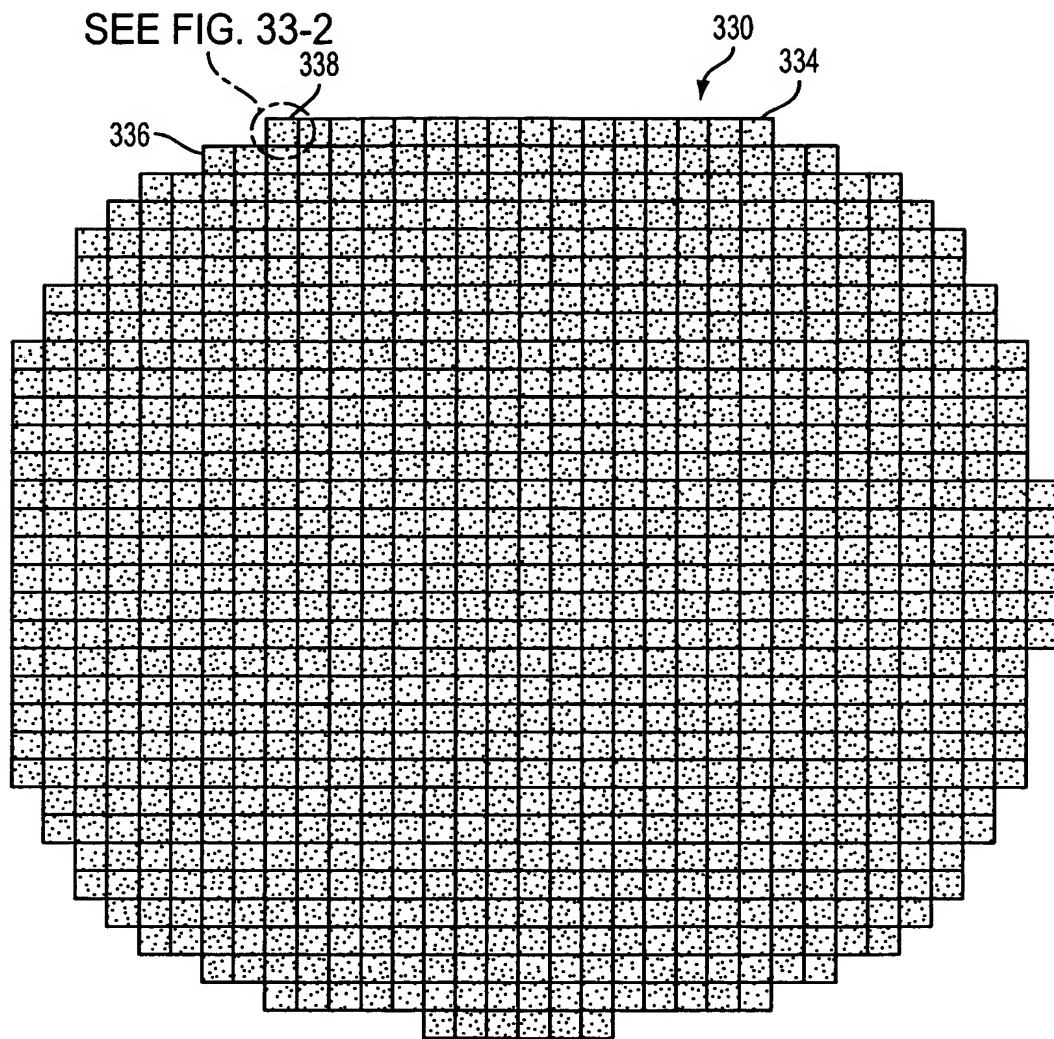


FIG. 33-1

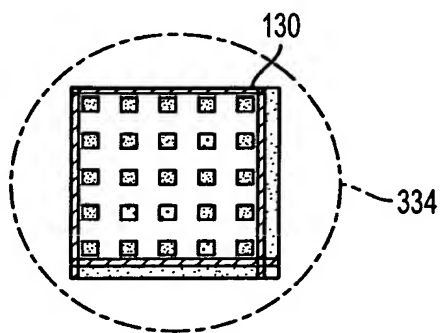


FIG. 33-2

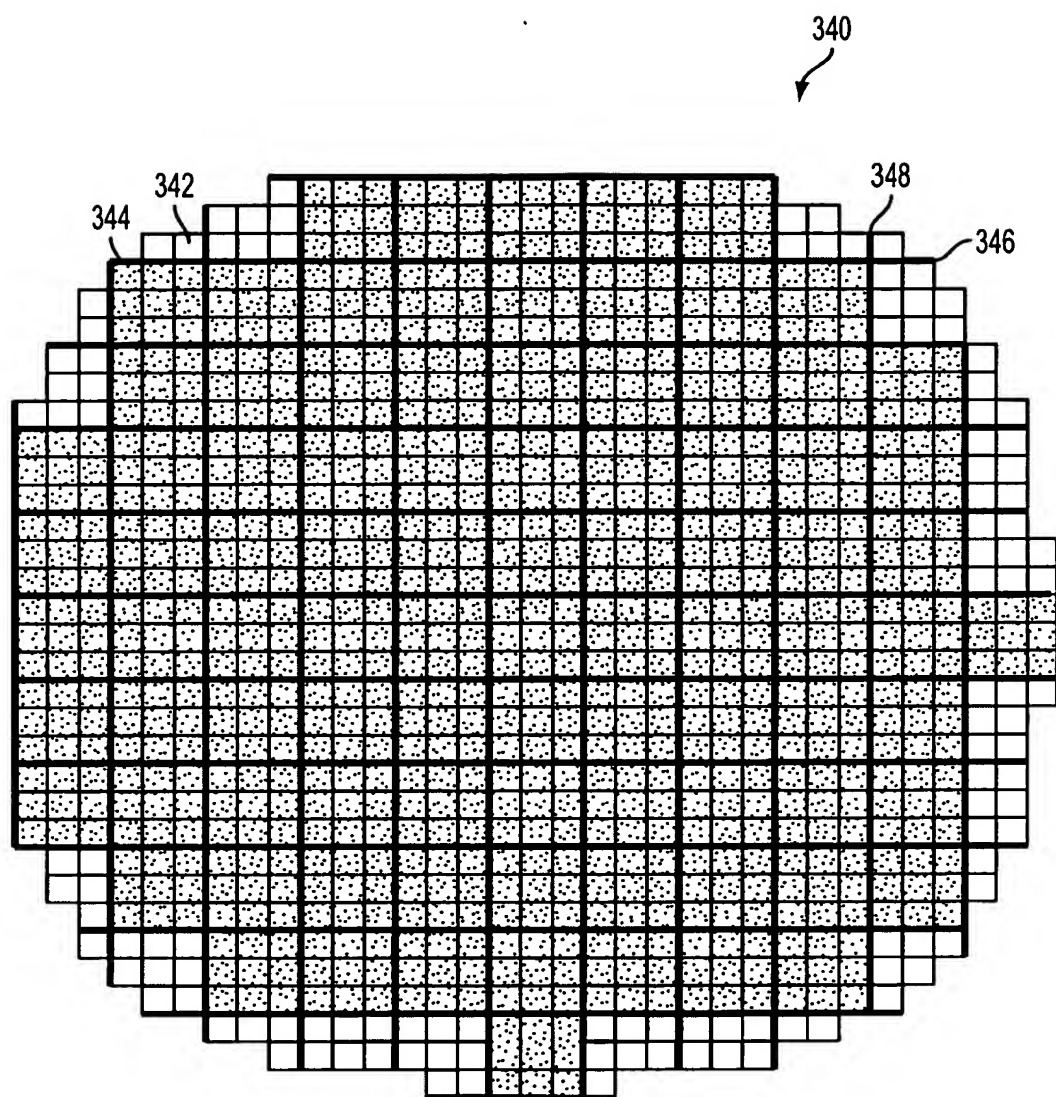


FIG. 34

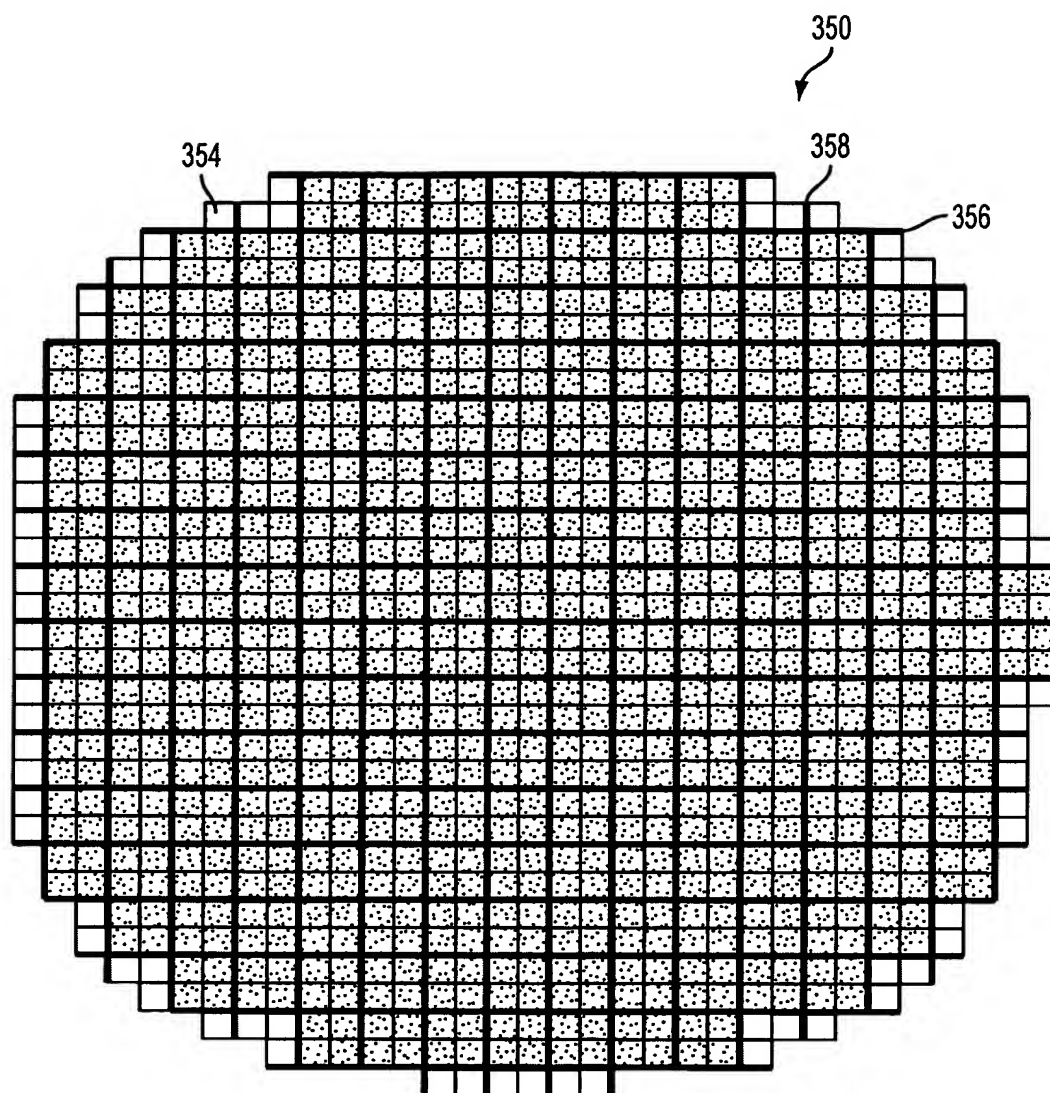


FIG. 35

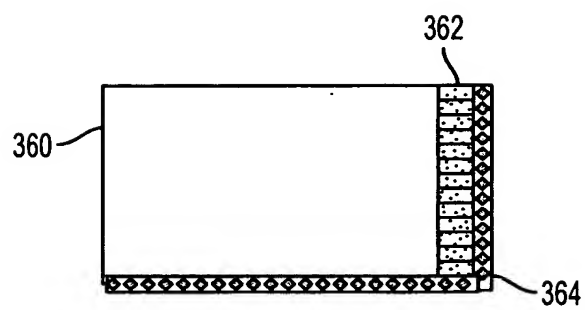


FIG. 36-A

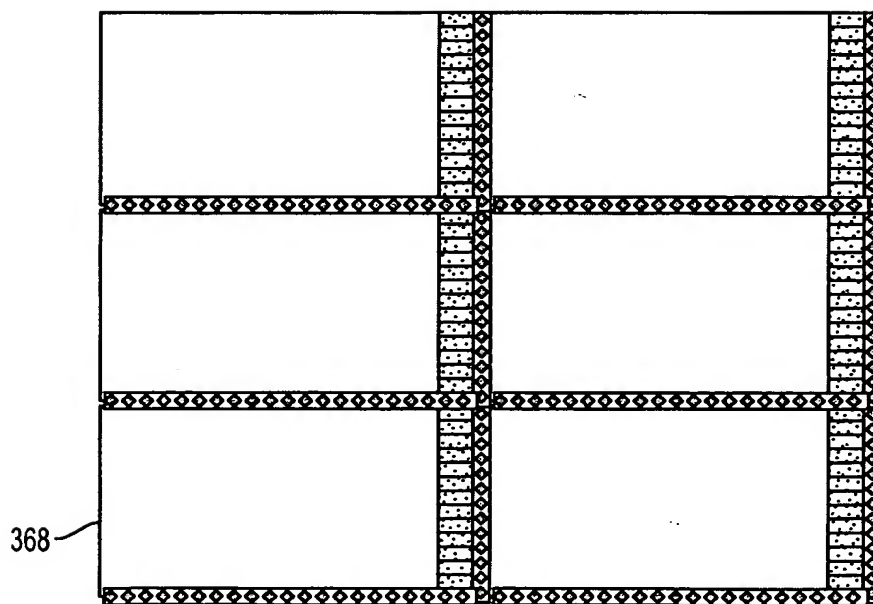


FIG. 36-B

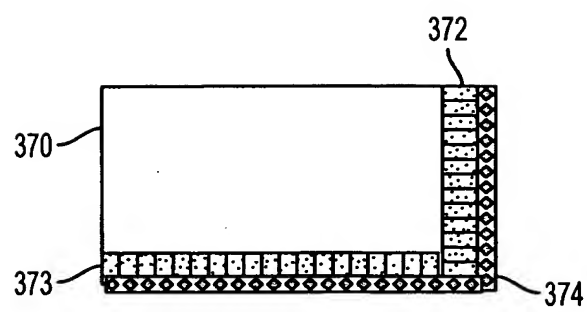


FIG. 37-A

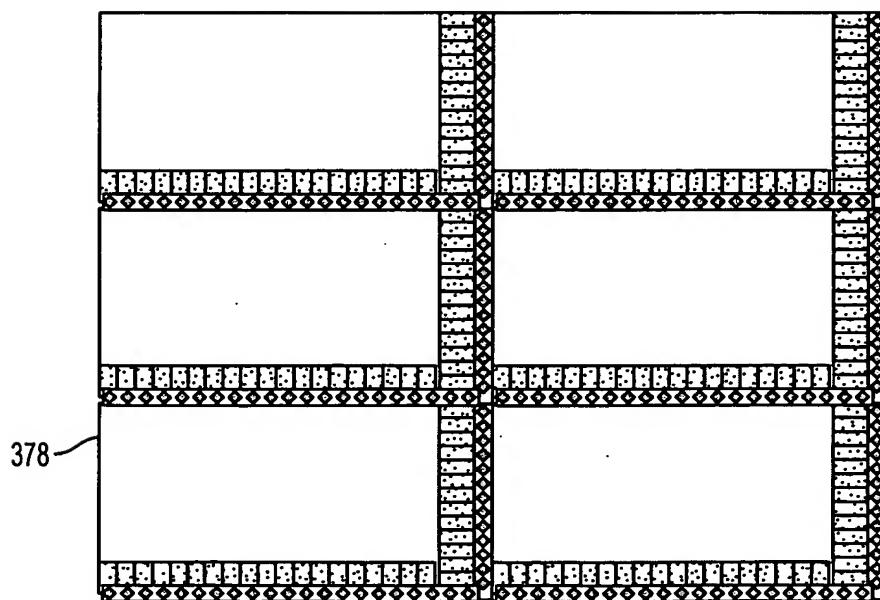


FIG. 37-B

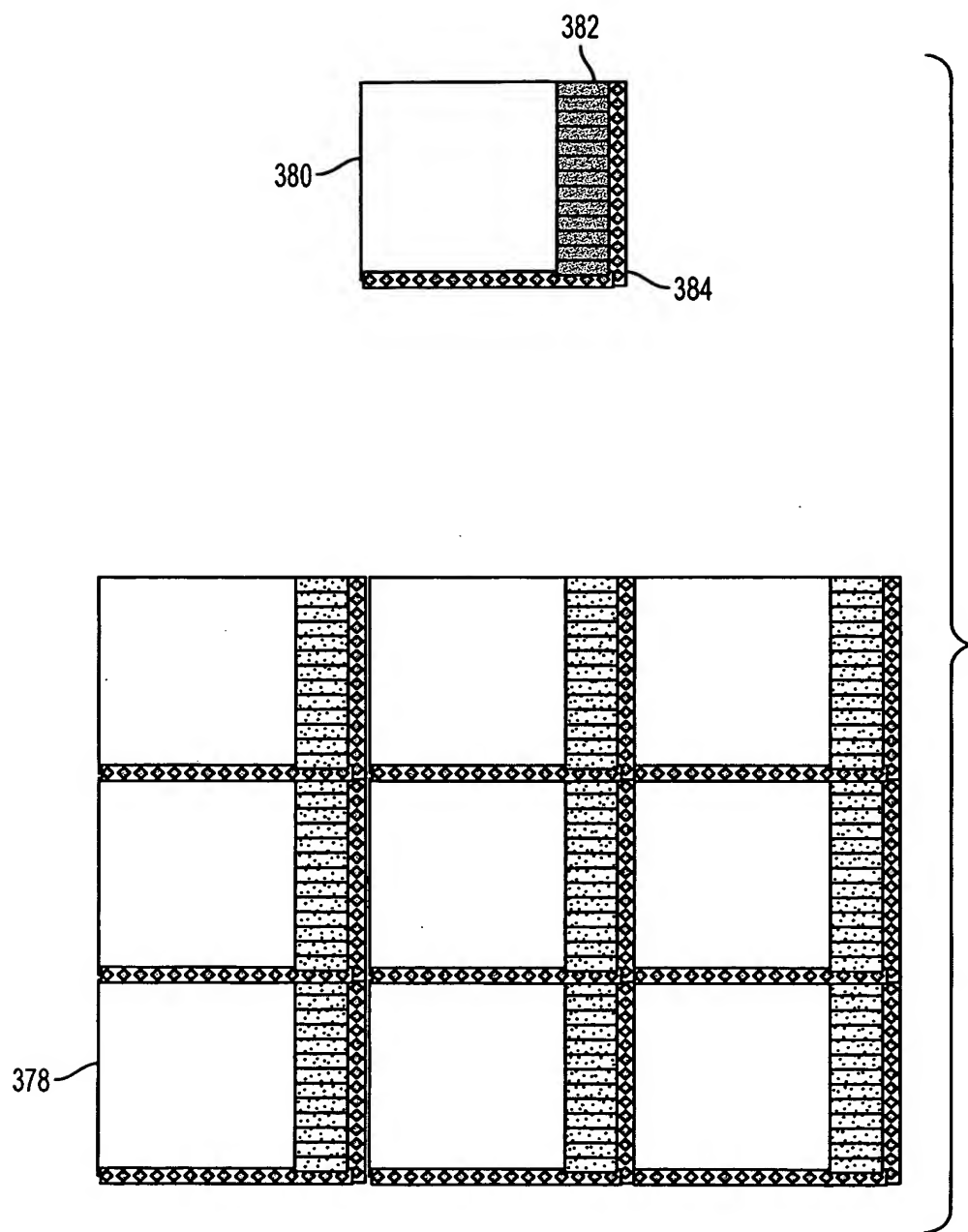


FIG. 38

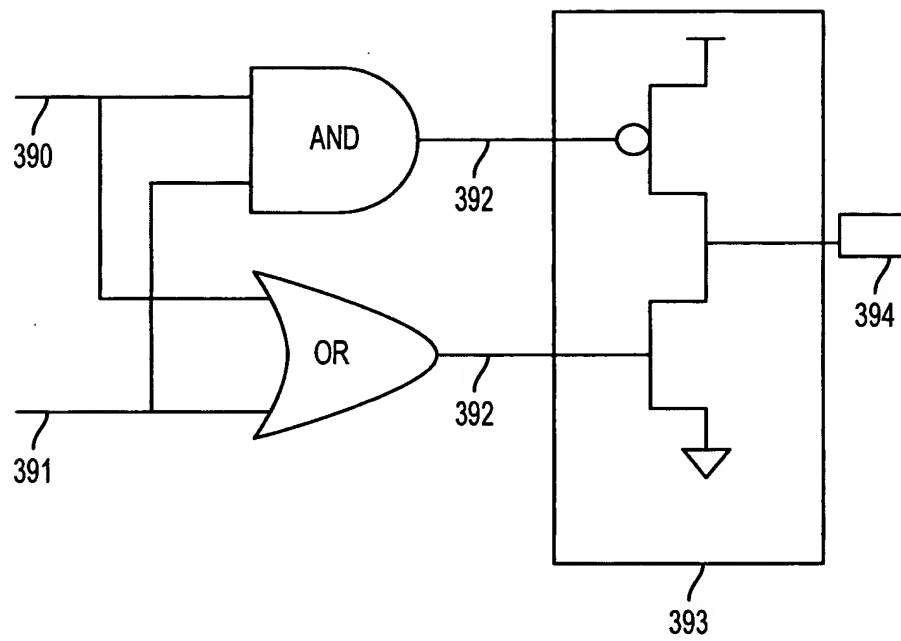


FIG. 39